

HE 20

491-B-13

6

0

NCHSR

RESEARCH REPORT
SERIES

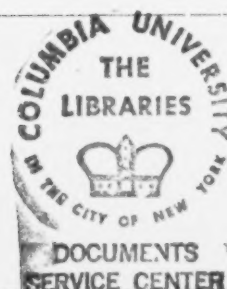
**An Annotated Bibliography
of Research on Competition
in the Financing and
Delivery of Health Services**

COLUMBIA UNIVERSITY
LIBRARIES

NOV 12 1982

U. S. DEPOSITORY
COPY

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Services Research



National Center for Health Services Research Research Report Series

The *Research Report Series* is published by the National Center for Health Services Research (NCHSR) to provide significant research reports in their entirety. Research Reports are developed by the principal investigators who conducted the research, and are directed to selected users of health services research as part of a continuing NCHSR effort to expedite the dissemination of new knowledge resulting from its project support. Research supported by NCHSR is submitted to peer review by non-Federal experts for scientific and technical accuracy.

Abstract

This annotated bibliography identifies and summarizes relevant research which provides insight into the issue of the nature and extent of competition and its effects in the market for health services. Literature containing discussions of proposed and/or implemented approaches to improving health services market performance is also included and summarized. A comprehensive bibliography of nearly 1,000 items is presented. More than 200 of the most relevant, useful, and important papers are annotated with the emphasis on describing the purpose, methods, and findings of each. These annotated items are also cross-classified by market area, emphasis, and policy issues addressed to assist researchers to identi-

fy significant research on selected topics of interest. Selected data sources that have been, or may be, used to conduct research on competition in the financing and delivery of health services are identified and described.

Project Abstract

NCHSR undertook a review of the research literature in response to the need for information on issues related to the role of market forces in the health care system. The review resulted in four publications. Two of the publications describe and summarize the research literature: *An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services*, DHHS Publication No. (PHS) 83-3326; and *A Synthesis of Research on Competition in the Financing and Delivery of Health Services*, DHHS Publication No. (PHS) 83-3327. An executive summary of these two reports is contained in *Research on Competition in the Financing and Delivery of Health Services: A Summary of Policy Issues*, DHHS Publication No. (PHS) 83-3328-1. The fourth publication is the proceedings of an NCHSR-sponsored conference on proposed research priorities held in Washington, D.C., on March 4, 1982, for Federal Government officials: *Research on Competition in the Financing and Delivery of Health Services: Future Research Needs*, DHHS Publication No. (PHS) 83-3328-2.

NCHSR

RESEARCH REPORT
SERIES

An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services

Kathryn M. Langwell
Joel D. Bobula
Sylvia F. Moore
Barbara B. Adams

October 1982

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Services Research

DHHS Publication No. (PHS) 83-3326

This *NCHSR Research Report* was prepared by Kathryn M. Langwell, Joel D. Bobula, Sylvia F. Moore, and Barbara B. Adams, Applied Management Sciences, Inc., Silver Spring, MD. Support was provided by the National Center for Health Services Research through contract 233-81-3031. The panel of consultants participating in this project with Applied Management Sciences, Inc., were: Roger Feldman, University of Minnesota; Lawrence Goldberg, University of Miami; Warren Greenberg, George Washington University; Harold Luft, University of California at San Francisco; Walter McClure, Center for Policy Studies, Inc.; Mark Pauly, Northwestern University; and Frank Sloan, Vanderbilt University. They provided direction and advice throughout the project and contributed to the focus and organization of this report. Robert T. Deane, Vice President of Applied Management Sciences, provided internal review and management support for the study. Louis F. Rossiter served as the NCHSR Project Officer.

Office of Health Research, Statistics, and Technology
Harold Margulies, M.D., Acting Deputy Assistant Secretary for
Health Research, Statistics, and Technology

National Center for Health Services Research
Donald E. Goldstone, M.D., Acting Director
Robert A. Fordham, Associate Deputy Director for State and
Local User Liaison

Division of Intramural Research
Samuel Korper, Ph.D., Director
Louis F. Rossiter, Ph.D., Project Officer

The views expressed in this publication are those of the authors, and no official endorsement by the National Center for Health Services Research is intended or should be inferred.

To cite this publication, please use the following:

Langwell, Kathryn M., Joel D. Bobula, Sylvia F. Moore, Barbara B. Adams, *An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services*, DHHS Pub. no. (PHS) 83-3326, U.S. Department of Health and Human Services, National Center for Health Services Research, 1982.

Library of Congress Card Catalog No. 82-600611.

Contents

1	Objectives and methods	iii
3	Classification of the literature	
19	Annotated bibliography	
61	Bibliography of research on competition in the financing and delivery of health services	
97	Data sources for research on competition in the financing and delivery of health services	
5	Table 1: Classification of the literature by market area and emphasis	
10	Table 2: Classification of the literature by policy issue addressed	
15	Table 3: Summary of selected proposals in the literature which would increase competition in the market for health services	
17	Table 4: Summary of selected legislative proposals which would increase competition in the market for health services	
93	Table 5: Selected data sources for study of competition and health care issues	



Objectives and methods

The National Center for Health Services Research, recognizing the need for information on issues related to competition in the financing and delivery of health services, determined that an examination of the literature relating to the theory of, evidence on, and proposed approaches to competition in this market should be conducted. The objectives of this examination were: (1) to identify relevant research findings which provide insight into the issue of competition and its effects in the market for health services and on approaches to improving the performance of this market; (2) to organize this body of literature; (3) to prepare an annotated bibliography which briefly summarizes and classifies the existing literature; (4) to synthesize the literature on the theory, evidence, and proposed application of competition to the financing and delivery of health services; and (5) to identify areas for which new and additional research are needed.

This report, *An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services*, represents the critical first step in the accomplishment of the objectives of this project. The approach used to prepare this report required that several activities be undertaken. As an initial step, a preliminary bibliography was assembled by drawing upon the bibliographic resources of Applied Management Sciences and of the National Center for Health Services Research (NCHSR). This early bibliography was then supplemented by a search of computerized data bases, and a manual search of public and university libraries. To identify unpublished research, manuscripts awaiting journal publication, and research in progress, a copy of the preliminary bibliography, as of November 1, 1981, was mailed to over 100 members of the health services and research community. These individuals were asked to review the bibliography in order to identify omissions and to write or telephone comments to Applied Management Sciences. Nearly half of the individuals contacted provided additional citations and/or informed us

of current or recently completed research that is related to this topic. In addition, Applied Management Sciences has been assisted in the bibliography development and refinement activities by several consultants to the project: Dr. Roger Feldman, University of Minnesota; Dr. Lawrence Goldberg, University of Miami; Dr. Warren Greenberg, George Washington University; Dr. Harold Luft, University of California; Dr. Walter McClure, Center for Policy Studies; Dr. Mark Pauly, Northwestern University; and Dr. Frank Sloan, Vanderbilt University.

A critical issue for the development of this project was to determine the categories of literature appropriate for inclusion in the bibliography. Resolution of this issue required that a general definition of "competition" be developed and that a philosophical orientation be agreed upon by participants in the study. The definitional approach that was adopted may be summarized as follows:

- Competition is a dynamic-process of interaction between independent buyers and independent sellers which results in a tendency for prices of goods and services to move toward the minimum level at which sellers are willing to produce and offer goods and services.
- A competitive market is one in which the structure of the market and the conduct of buyers and sellers causes prices to tend toward the lowest level at which sellers are willing to produce and offer goods and services.

Within the context of this definitional framework, it was agreed that the search of the literature would focus on four areas of research and policy discussions: (1) *structure* of the market for health services; (2) *conduct* of buyers, sellers, and other participants in the market; (3) *performance* of the market, as it is related to the nature and extent of competitive forces; and (4) *policy discussions* which identify competitive issues and/or provide recommendations which are designed

to strengthen competitive forces within the market for health services.

This very broad framework resulted in identification of a large volume of potential citations to be included in the bibliography and to be considered for annotation. To narrow the focus of the project, decisions were made that resulted in the exclusion of certain categories of literature:

- Articles which appear in sources which ordinarily are not research-oriented (e.g. *Medical Economics*, *Newsweek*, *Medical Group Management*);
- Articles which merely summarize policy proposals, without adding new approaches;
- 2 • Papers which have neither been published, presented at professional conferences, nor otherwise subjected to professional scrutiny; and
- Selected topic areas of relevance to the market for health services, but of limited usefulness for the issues to be addressed in this study (e.g. studies of demand for health services, production functions, cost functions, hospital rate-setting).

Occasional exceptions were made to these rules. If an article or paper included a unique focus or interpretation that was particularly interesting or that had received much attention in the health services or research communities, it was included in the bibliography. The vast majority of research reports and papers which fell within these categories were excluded from the bibliography.

A set of key papers was selected from this bibliography to be annotated. The choice of these key papers was made on the basis of criteria (listed on page 19) which were developed in consultation with the project's consultants and the Project Officer.

The objective of this selection process was to include the most important articles in the topic area. Approximately 220 references have been annotated. Each annotation is brief (i.e., 75 to 150 words) and describes the purpose, the methods, and the findings or conclusions drawn by the author.

Classification tables are also included as a supplement to the annotated bibliography to assist readers by highlighting specific features of each article. In Table 1, every annotated article is classified to indicate whether the focus is on theory, evidence, and/or policy. Similarly, all articles are classified by area of emphasis in describing conditions in the health care market, including issues of price competition, nonprice competition, and barriers to competition. In Table 2, the annotated articles are also classified by relevance to certain key policy issues. Two final summary tables list and describe current procompetition proposals discussed in the literature or in legislation introduced into the 96th or 97th Congress of the United States.

The organization of the remaining sections of this report includes:

- Discussion and presentation of the classification of the literature;
- Description of the criteria used for the selection of articles to be annotated and the annotations;
- Introduction to the bibliography and the complete list of citations; and
- Summary of data sources relevant to the topic area and the decision rules used to select the data sources listed.

Classification of the literature

The central purpose of this *Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services* is to provide a reference source for individuals with an interest in issues of competition in the market for health services. In order to assist the reader, the literature is classified in this Chapter under four major headings:

- *Table 1: Classification of the Literature by Market Area and Emphasis*
- *Table 2: Classification of the Literature by Policy Issues Addressed*
- *Table 3: Summary of Selected Proposals in the Literature Which Would Increase Competition in the Market for Health Services*
 - author or sponsor
 - key features
- *Table 4: Summary of Selected Legislative Proposals Which Would Increase Competition in the Market for Health Services*
 - author or sponsor
 - key features

In Table 1, the components of the market for health services are examined, focusing on the markets for the services of physicians, dentists, hospitals, insurance, delivery systems (e.g. fee-for-service, HMOs), and a residual "other markets" category. This residual category includes laboratory services, pharmaceuticals, nursing homes, and other health professionals. Within these submarkets, each annotated article has been classified by whether it addresses *theoretical issues*, *empirical evidence*, and/or *policy questions*. The "emphasis" categories describe the competitive characteristics of the market considered,

including price competition, nonprice competition, and barriers to competition.

Table 2 classifies these same articles by their relevance to major policy issues in the health services market. The list of issues was developed in consultation with the project's consultants and the Project Officer. An attempt has been made to distinguish those issues which appear to be particularly relevant to the debates over the use of competitive strategies. Within several of the policy issues selected there are a number of subheadings (e.g. *Consumer Choice*: information, advertising, induced demand, adverse selection) which represent specific areas that have been addressed in research on that issue. As can be clearly seen by reviewing this table, there are many policy issues for which little evidence is available.

Table 3 summarizes various proposals found in the literature which suggest remedies to the problems of the health services market that involve increasing the extent of competition in this market. Table 4 summarizes the major legislative proposals which contain provisions designed to increase competition in the market for health services. The name of the proposal, the author or sponsor, and selected key features of the proposals are included in both Tables.

The extremely short time frame of this study, combined with the very large body of literature which exists, made it impossible to classify all the citations in the bibliography. Only those documents which have been selected for annotation have been classified in Tables 1 and 2. However, the literature classified in Tables 1 and 2 does represent the major studies and papers on the topic of competition in the financing and delivery of health services. Consequently, they provide an initial foundation for the study of this area.

TABLE 1: CLASSIFICATION OF THE LITERATURE BY MARKET AREA AND EMPHASIS

CLASSIFICATION

AUTHOR	Health Services			Physicians			Dentists			Hospitals			Alternative Delivery Systems			Insurance			Other Markets			Emphasis		
	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Price Competition	Non-Price Competition	Barriers to Competition
Altman and Socholitzky (1981)																								
Altman and Wallack (1981)																								
Anderson, et al. (1981)																								
Arnould and Eisenstadt (1981)																								
Arrow (1983)																								
Association of American Medical Colleges (1981)																								
Auster and Gordon (1978)																								
Auster and Oaxaca (1981)																								
Bailey (1977)																								
Benham and Benham (1975)																								
Benham, et al. (1968)																								
Berki and Ashcraft (1980)																								
Berki, et al. (1977)																								
Berry (1979)																								
Bice (1975)																								
Bishop (1980)																								
Blackstone (1978)																								
Blair, et al. (May 1975)																								
Blair, et al. (June 1975)																								
Bloom and Stiff (1980)																								
Blumberg (1980)																								
Blumstein and Zubkoff (1979)																								
Bovbjerg (1981)																								
Brown (1981)																								
Brown and Lapan (1981)																								
Cady (1976)																								
Christianson (n.d.)																								
Christianson and McClure (1979)																								
Clark (1980)																								
"Competition in the Health Services Market" (1974)																								
Conrad and Emerson (1981)																								
"Containment of Hospital Costs: A Strategic Assessment" (1978)																								
Cromwell, et al. (1978)																								
David (1981)																								
Davis and Russell (1972)																								
Dutton (1979)																								
Dyckman (1978)																								
Egdahl and Walsh (1977)																								
Egdahl, et al. (1977)																								
Eggers (1980)																								
Ehrlich and Becker (1972)																								
Eisenberg (1980)																								
Eisenstadt and Kennedy (1981)																								
Ellwood (1975)																								
Enthoven (1978)																								
Enthoven (1979)																								

TABLE 1: CLASSIFICATION OF THE LITERATURE BY MARKET AREA AND EMPHASIS (cont.)

CLASSIFICATION																									
AUTHOR	Health Services			Physicians			Dentists			Hospitals			Alternative Delivery Systems			Insurance			Other Markets			Emphasis			
	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Price Competition	Non-Price Competition	Barriers to Competition	
Enthoven (1980)			•																			•	•	•	
Enthoven (July 1981)			•																			•	•	•	
Enthoven (1981)			•																			•	•	•	
Evans (1974)				•	•																		•	•	
Evans (1980)						•																	•	•	
Feldman and Begun (1978)																								•	
Feldman and Greenberg (1981)																								•	
Feldstein (1970)				•	•																			•	
Feldstein (Spring 1971)																								•	
Feldstein (December 1971)																								•	
Feldstein (1973)																								•	
Feldstein and Friedman (1977)																								•	
Feldstein (1977)	•		•																					•	
Ferber (1971)																								•	
Fraundorf (1975)																								•	
Frech (1976)																								•	
Frech (1979)																								•	
Frech (1980)																								•	
Frech and Ginsburg (1975)																								•	
Fuchs (1978)																								•	
Fuchs and Kramer (1972)	•	•		•	•																			•	
Fuller, et al. (1977)																								•	
Gabel and Redisch (1979)				•		•																		•	
Gertman (1974)				•																				•	
Ginsburg (1980)																								•	
Ginsburg (Spring 1981)																								•	
Ginsburg (September 1981)			•																					•	
Goldberg and Greenberg (1977)																								•	
Goldberg and Greenberg (1980)																								•	
Goldberg and Greenberg (1981)																								•	
Goldberg and Greenberg (1981)																								•	
Green (1972)																								•	
Greenberg (1981)																								•	
Greenspan and Vogel (1980)																								•	
Hall and Lindsay (1980)				•	•																			•	
Harris (1977)																								•	
Harris (1979)																								•	
Havighurst (1970)																								•	
Havighurst (1973)			•																					•	
Havighurst (1975)			•																					•	
Havighurst (1978)																								•	
Havighurst (1979)			•																					•	
Havighurst (1980)			•																					•	
Havighurst and Hackbarth (1979)			•																					•	

TABLE 1: CLASSIFICATION OF THE LITERATURE BY MARKET AREA AND EMPHASIS (cont.)

CLASSIFICATION

AUTHOR	Health Services			Physicians			Dentists			Hospitals			Alternative Delivery Systems			Insurance			Other Markets			Emphasis		
	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Price Competition	Non-Price Competition	Barriers to Competition
Havighurst and Kissam (1979)																								
Hellinger (1978)																								
Helms (1978)																								
Hester and Sussman (1974)																								
Hetherington (1975)																								
Holahan (1977)																								
Holahan, et al. (1980)																								
Holahan and Feder (1981)																								
Hornbrook (1978)																								
House (1981)																								
Hsiao, et al. (1980)																								
Huang and Rosett (1972)																								
Iglehart (1980)																								
Joskow (1980)																								
Juba (1979)																								
Kass and Paultler (1979)																								
Kass and Pautler (1981)																								
Kelly, et al. (1975)																								
Kessel (1958)																								
Kissam (1976)																								
Kissam (1978)																								
Kissam (1981)																								
Kissam and Johnson (1976)																								
Kushman (1981)																								
Kushman and Scheffler (1978)																								
Landon and Link (1975)																								
Leffler (1978)																								
Leffler and Lindsay (1981)																								
Lindsay (1973)																								
Lomansky (1981)																								
Luft (January 1980)																								
Luft (Fall 1980)																								
Luft and Trauner (1981)																								
Lynk (1981)																								
Mabee (1980)																								
Marmor, et al. (1981)																								
Marshall (1976)																								
Masson and Wu (1974)																								
Maurizi (1974)																								
Maurizi (1975)																								
McClure (1978)																								
McClure (1981)																								
McGuire (1980)																								
McGuire (1981)																								

TABLE 1: CLASSIFICATION OF THE LITERATURE BY MARKET AREA AND EMPHASIS (cont.)

CLASSIFICATION

	Health Services	Physicians	Dentists	Hospitals	Alternative Delivery Systems	Insurance	Other Markets	Emphasis
AUTHOR	Theory Evidence Policy	Theory Evidence Policy	Theory Evidence Policy	Theory Evidence Policy	Theory Evidence Policy	Theory Evidence Policy	Theory Evidence Policy	Price Competition Non-Price Competition Barriers to Competition
McLean (1980)		•	•					•
McNeil and Schlenker (1975)					•	•	•	
Mechanic (1975)					•	•		
Meilton (1979)		•	•					
Meyer (1981)		•						
Mitchell and Phelps (1976)						•	•	•
Mitchell and Vogel (1975)						•		
Monsma (1970)		•	•					
Moran (1981)						•		•
Morrissey, et al. (1980)					•			
Muller and Otelsberg (1980)			•					
Musgrave (1980)			•	•				
Needleman (1980)		•			•			
Neuhauser (1974)								
Newhouse (1970)		•	•					•
Newhouse (1981)	•	•						•
Newhouse, et al. (1981)		•						
Newhouse and Taylor (1971)		•				•		•
Noli (1975)				•				•
Paul (1982)		•	•					•
Pauly (1968)						•		
Pauly (March 1970)		•		•				
Pauly (September 1970)						•		
Pauly (1974)				•				•
Pauly (1979)		•						•
Pauly (1980)		•	•	•	•			•
Pauly (1980)						•	•	
Pauly (December 1980)		•	•	•	•			
Pauly (1981)		•	•	•	•			•
Pauly and Redisch (1973)		•		•				
Pauly and Satterthwaite (1980)		•	•					•
Pollard (1980)		•						•
Pollard and Leibenluft (1981)		•						•
Posner (1974)				•				•
Praiss, et al. (1979)				•		•	•	
Ramsey (1980)		•	•					
Redisch (1980)		•		•				•
Redisch, et al. (1981)		•	•					•
Reiman (1980)		•						•
Richardson (1980)					•			•
Roemer (1971)						•		•
Roemer, et al. (1973)						•		•
Rosenblatt (1978)		•						•
Rossiter (1981)			•					

TABLE 1: CLASSIFICATION OF THE LITERATURE BY MARKET AREA AND EMPHASIS (cont.)

CLASSIFICATION

AUTHOR	Health Services			Physicians			Dentists			Hospitals			Alternative Delivery Systems			Insurance			Other Markets			Emphasis		
	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Theory	Evidence	Policy	Price Competition	Non-Price Competition	Barriers to Competition
Rossiter and Taylor (1982)																								
Ruffin and Leigh (1973)																								
Rushefsky (1981)																								
Russell (1979)																								
Salkever and Bice (1976)																								
Sapolsky (1980)																								
Scheffler (1975)																								
Schoen (1980)																								
Schroeder and Showstack (1978)																								
Scitovsky and McCall (1980)																								
Scitovsky, et al. (1978)																								
Seidman (1977)																								
Seidman (1980)																								
Seidman (1981)																								
Shaffert, et al. (1980)																								
Shalit (1977)																								
Shepard (1978)																								
Shulman and Galanter (1976)																								
Sloan (1974)																								
Sloan (1976)																								
Sloan (1980)																								
Sloan (1981)																								
Sloan (1982)																								
Sloan and Feldman (1978)																								
Sloan and Steinwald (1975)																								
Sloan and Steinwald (1980)																								
Stano (1931)																								
Steele (1962)																								
Steuerle and Hoffman (1979)																								
Tessler and Mechanic (1975)																								
Ting (1975)																								
U.S. Congress (1977)																								
U.S. Congress (1980)																								
Vogel (1977)																								
Vogel (1980)																								
Weiner (1978)																								
Wennberg, et al. (1978)																								
Wilensky (1982)																								
Wolinsky (1980)																								
Woodward (1978)																								
Woodward and Warren-Boulton (1981)																								
Zeckhauser and Zook (1981)																								
Zelten (1979)																								

TABLE 2: CLASSIFICATION OF THE LITERATURE BY POLICY ISSUES ADDRESSED

AUTHOR	ISSUES											
	Financing Issues			Professional Practice Restraints			Consumer Choice				Tax Issues	Nonprofit Institutions
	Premium Rating	Reimbursement Methods	Cost-Sharing	Professional Association	State Practice Acts	Insurers	Information	Advertising	Induced Demand	Adverse Selection		
Altman and Socholtzky (1981)												
Altman and Wallack (1981)		•										
Anderson, et al. (1981)		•				•						
Arnould and Eisenstadt (1981)				•		•					•	•
Arrow (1963)						•	•			•		
Association of American Medical Colleges (1981)												
Auster and Gordon (1978)		•	•				•					
Auster and Oaxaca (1981)									•			
Bailey (1977)				•								
Benham and Benham (1975)				•	•		•	•				•
Benham, et al. (1968)					•							
Berki and Ashcraft (1980)												•
Berki, et al. (1977)										•		•
Berry (1979)											•	
Bice (1975)												•
Bishop (1980)		•										
Blackstone (1978)												
Blair, et al. (May 1975)												
Blair, et al. (June 1975)												•
Bloom and Stiff (1980)							•	•				
Blumberg (1980)												•
Blumstein and Zubkoff (1979)												
Bovbjerg (1981)												•
Brown (1981)												•
Brown and Lapan (1981)												
Cady (1976)				•	•		•					•
Christianson (n.d.)												•
Christianson and McClure (1979)												•
Clark (1980)												•
"Competition in the Health Services Market" (1974)	•	•	•									
Conrad and Emerson (1981)				•	•							
"Containment of Hospital Costs: A Strategic Assessment" (1978)		•										
Cromwell, et al. (1978)												
David (1981)				•								•
Davis and Russell (1972)			•									
Dutton (1979)		•								•		
Dyckman (1978)		•		•								
Egdahl and Walsh (1977)												•
Egdahl, et al. (1977)												•
Eggers (1980)	•											•
Ehrlich and Becker (1972)										•		
Eisenberg (1980)				•								

TABLE 2: CLASSIFICATION OF THE LITERATURE BY POLICY ISSUES ADDRESSED (cont.)

AUTHOR	ISSUES											
	Financing Issues			Professional Practice Restraints			Consumer Choice				Tax Issues	Nonprofit Institutions
	Premium Rating	Reimbursement Methods	Cost-Sharing	Professional Association	State Practice Acts	Insurers	Information	Advertising	Induced Demand	Adverse Selection		
Eisenstadt and Kennedy (1981)						•						•
Ellwood (1975)												•
Enthoven (1978)		•	•								•	•
Enthoven (1979)		•	•									•
Enthoven (1980)		•	•			•					•	
Enthoven (July 1981)		•	•									
Enthoven (1981)		•	•									
Evans (1974)									•			•
Evans (1980)		•										•
Feldman and Begun (1978)								•				
Feldman and Greenberg (1981)												
Feldstein (1970)									•			
Feldstein (Spring 1971)		•										
Feldstein (December 1971)												•
Feldstein (1973)		•										
Feldstein and Friedman (1977)										•		
Feldstein (1977)				•	•	•						
Ferber (1971)												•
Fraundorf (1975)												•
Frech (1976)												•
Frech (1979)						•						•
Frech (1980)						•						•
Frech and Ginsburg (1975)		•					•				•	
Fuchs (1978)												
Fuchs and Kramer (1972)									•			
Fuller, et al. (1977)									•			
Gabel and Redisch (1979)		•							•			•
Gertman (1974)									•			
Ginsburg (1980)		•	•									
Ginsburg (Spring 1981)			•									•
Ginsburg (September 1981)												
Goldberg and Greenberg (1977)				•		•						
Goldberg and Greenberg (1980)												•
Goldberg and Greenberg (1981)												•
Goldberg and Greenberg (1981)						•						
Green (1972)					•							•
Greenberg (1981)						•						
Greenspan and Vogel (1980)										•		
Hall and Lindsay (1980)				•								
Harris (1977)										•		
Harris (1979)										•		•
Havighurst (1970)										•		
Havighurst (1973)												•
Havighurst (1975)												•
Havighurst (1978)				•		•						•

TABLE 2: CLASSIFICATION OF THE LITERATURE BY POLICY ISSUES ADDRESSED (cont.)

AUTHOR	ISSUES												
	Financing Issues			Professional Practice Restraints			Consumer Choice				Tax Issues	Nonprofit Institutions	Alternative Health Care Systems
	Premium Rating	Reimbursement Methods	Cost-Sharing	Professional Association	State Practice Acts	Insurers	Information	Advertising	Induced Demand	Adverse Selection			
Havighurst (1979)		•											
Havighurst (1980)													•
Havighurst and Hackbarth (1979)		•											
Havighurst and Kissam (1979)		•		•									
Hellinger (1978)		•											
Helms (1978)							•				•		
Hester and Sussman (1974)												•	
Hetherington (1975)												•	
Holahan (1977)												•	
Holahan, et al. (1980)		•											
Holahan and Feder (1981)		•											
Hornbrook (1978)								•					
House (1981)													
Hsiao, et al. (1980)													
Huang and Rosett (1972)	•												
Iglehart (1980)												•	
Joskow (1980)													•
Juba (1979)				•									
Kass and Pautler (1979)			•			•							
Kass and Pautler (1981)											•		
Kelly, et al. (1975)													
Kessel (1958)				•									•
Kissam (1976)					•								•
Kissam (1978)					•								•
Kissam (1981)				•	•								•
Kissam and Johnson (1976)												•	•
Kushman (1981)					•								
Kushman and Scheffler (1978)					•								
Landon and Link (1975)					•								
Leffler (1978)					•		•						
Leffler and Lindsay (1981)					•								
Lindsay (1973)				•									
Lomansky (1981)		•											
Luft (January 1980)												•	
Luft (Fall 1980)												•	
Luft and Trauner (1981)												•	
Lynk (1981)						•							
Mabee (1980)													
Marmor, et al. (1981)			•										•
Marshall (1976)													
Masson and Wu (1974)													
Maurizi (1974)					•								•
Maurizi (1975)					•								•
McClure (1978)													•

TABLE 2. CLASSIFICATION OF THE LITERATURE BY POLICY ISSUES ADDRESSED (cont.)

ISSUES														
AUTHOR	Financing Issues			Professional Practice Restraints			Consumer Choice				Tax Issues	Nonprofit Institutions	Alternative Health Care Systems	Regulations
	Premium Pating	Reimbursement Methods	Cost-Sharing	Professional Association	State Practice Acts	Insurers	Information	Advertising	Induced Demand	Adverse Selection				
McClure (1981)														•
McGuire (1980)														
McGuire (1981)													•	
McLean (1980)													•	
McNeil and Schlenker (1975)													•	
Mechanic (1975)													•	
Meilton (1979)													•	
Meyer (1981)														
Mitchell and Phelps (1976)														
Mitchell and Vogel (1975)														
Monsma (1970)										•				
Moran (1981)										•				
Morrissey, et al. (1980)													•	
Muller and Otelsberg (1980)													•	
Musgrave (1980)		•												
Needleman (1980)														
Neuhauser (1974)														
Newhouse (1970)												•	•	
Newhouse (1981)														•
Newhouse, nt al. (1981)														
Newhouse and Taylor (1971)	•						•							
Noll (1975)														
Paul (1982)														•
Pauly (1968)				•	•									
Pauly (March 1970)		•												
Pauly (September 1970)	•													
Pauly (1974)														
Pauly (1979)												•		
Pauly (1980)							•			•				
Pauly (1980)														
Pauly (December 1980)														
Pauly (1981)												•		
Pauly and Redisch (1973)												•		
Pauly and Sutterthwaite (1980)												•		
Pollard (1980)		•					•			•				
Pollard and Leibenluft (1981)				•	•		•						•	•
Posner (1974)														•
Praiss, et al. (1979)														•
Ramsey (1980)														
Redisch (1980)										•		•		
Redisch, et al. (1981)														
Reiman (1980)										•				
Richardson (1980)					•								•	•
Roemer (1971)														•

TABLE 2: CLASSIFICATION OF THE LITERATURE BY POLICY ISSUES ADDRESSED (cont.)

AUTHOR	ISSUES											
	Financing Issues			Professional Practice Restraints			Consumer Choice				Tax Issues	Nonprofit Institutions
	Premium Rating	Reimbursement Methods	Cost-Sharing	Professional Association	State Practice Acts	Insurers	Information	Advertising	Induced Demand	Adverse Selection		
Roemer, et al. (1973)												
Rosenblatt (1978)												
Rossiter (1981)												
Rossiter and Taylor (forthcoming)												
Ruffin and Leigh (1973)												
Rushefsky (1981)		•	•									
Russell (1979)												
Salkever and Bice (1976)												
Sapolsky (1980)												
Scheffler (1975)												
Schoen (1980)												
Schroeder and Showstack (1978)		•										
Scitovsky and McCall (1980)												
Scitovsky, et al. (1978)												
Seidman (1977)			•									
Seidman (1980)			•									
Seidman (1981)			•									
Shaffert, et al. (1980)		•										
Shalit (1977)												
Shepard (1978)					•							
Shulman and Galanter (1976)												
Sloan (1974)												
Sloan (1976)												
Sloan (1980)		•										
Sloan (1981)				•		•						
Sloan (1982)												
Sloan and Feldman (1978)				•					•			
Sloan and Steinwald (1975)		•										
Sloan and Steinwald (1980)												
Stano (1981)				•								
Steele (1962)												
Steuerle and Hoffman (1979)											•	
Tessler and Mechanic (1975)												
Ting (1975)												
U.S. Congress (1977)												
U.S. Congress (1980)											•	
Vogel (1977)											•	
Vogel (1980)											•	
Weiner (1978)												
Wennberg, et al. (1978)									•		•	
Wilensky (1982)												
Wolinsky (1980)												
Woodward (1978)												
Woodward and Warren-Boulton (1981)		•							•			
Zeckhauser and Zook (1981)												
Zelten (1979)		•										

TABLE 3: SUMMARY OF SELECTED PROPOSALS IN THE LITERATURE WHICH WOULD INCREASE COMPETITION IN THE MARKET FOR HEALTH SERVICES

Name and Sponsor	Description of Key Features
1. Consumer Choice Health Plan: Alain Enthoven (1979)	Once a year, each consumer (i.e., individual or family) would be offered the opportunity to enroll for the coming year in any one of the qualified health plans operating in his/her area. Whatever financial assistance the individual or family gets toward the purchase of its health insurance—from Medicare, Medicaid, employer, or tax laws—would be the same whichever qualified health plan the consumer selects. Consumers would be responsible for paying out-of-pocket the higher premium cost associated with more expensive health plans. A uniform set of rules would apply to all health plans. These rules would include specification of premium rating method (i.e. community), catastrophic coverage, and covered benefits. Each health plan would offer one or two standard plans to the whole community rather than a different, specifically negotiated plan for each employee group.
2. National Commission on the Cost of Medical Care: American Medical Association (1978)	Two approaches for cost control: (1) strengthening price consciousness, and (2) increased use of public utility type regulation. Commission's recommendations stressed here reflect the approach of strengthening price consciousness: — Economic incentives in purchasing insurance and health plans: a) Employer contributions would be the same for each employee, no matter what plan the employee belonged to. b) Open enrollment at all times. c) Fixed dollar tax credit or tax deduction for health insurance costs to increase consumer price consciousness. d) Individuals who purchased their own insurance would pay no more for the same coverage than employer-provided plans, except for administrative and actuarial adjustments. — Consumer cost sharing: Consumers should share in the cost of services received at the time services are received and employees should share in the cost of employer-paid premiums. — Fair market health plan competition: HMOs and other providers and insurance systems should compete on the basis of services delivered and price. — Alternative financing arrangements: Experiments should be conducted to test effectiveness of alternative health financing arrangements. — Regional physician and hospital directories: Should contain information on prices for standard procedures, waiting time for appointments, willingness to accept Medicare or Medicaid, and other information relevant to consumer choice. — Information on alternative health care plan benefits:
3. Variable Cost Insurance (VCI): J. Newhouse and V. Taylor (1970)	Hospitals are rated according to how expensive they are. Consumers choose one hospital as their "primary" hospital; their insurance premiums and coverage levels are then based on that hospital's expense rating. Consumers are free to utilize either a more expensive hospital than the one on which their insurance is based (in which case they pay the differential out of pocket) or a less expensive hospital (in which case some sort of rebate would be issued).

Provides no incentive to curtail length of stay (LOS) or admissions rate.

Eliminates incentive to choose only the "best" hospital; lays groundwork for limited price competition among hospitals.

Expense rating could be extended to physicians.

4. Health Care Alliances (HCAs): P. Ellwood and W. McClure (1976)

Utilizes similar expense rating scheme to VCI plan except that the rating scheme is applied to physicians in group practices or health care alliances (HCAs).

Premiums based on the group's expense rating.

5. Physician-Based Group Insurance (PBGI): F. Evans (1980)

Primary care physician sponsors a group insurance policy on behalf of his/her patients.

Cost of that policy to the patient/consumer becomes a function of the physician's cost effectiveness in the practice of medicine.

Physician chooses insurance company; patient chooses physician and pays premium to that physician's insurance company.

To be covered by the policy patient must receive all primary care from that physician and be referred by that physician for all other non-emergency care.

Patient would not be prohibited from changing primary physicians (and thus changing insurance policies), nor would physicians be prohibited from changing insurance companies if dissatisfied with service or coverage.

6. Health Care Vouchers for Medicare: P. Ginsburg (1981) and others

Vouchers for fixed dollar amounts would be issued to each program participant (consumer) annually.

Consumer would then have the responsibility to "shop around" for the most economical mix of services given his level of subsidy.

System would have to be monitored carefully in order to prevent abuses on the part of the providers in terms of quality and cost of services versus price.

TABLE 4: SUMMARY OF SELECTED LEGISLATIVE PROPOSALS WHICH WOULD INCREASE COMPETITION IN THE MARKET FOR HEALTH SERVICES

PROPOSALS	
Name and Sponsor	Description of Key Features
1. H.R.3943 (96th Congress): Rep. James R. Jones	Permits special tax treatment only for health insurance plans requiring a 25 percent annual hospitalization deductible, up to \$2,000 or 15 percent of a family's gross income.
2. S.433 (96th Congress): Health Incentives Reform Act: Sen. David Durenberger	Requires employers to offer multiple choice option to employees. Employers contribute same amount for each employee regardless of the cost of the plan chosen by the employee (fixed dollar subsidy). Limits the tax-free employer contribution for health benefits to the cost of the last expensive federally-qualified HMO in the area or to the national average premium for a federally-qualified HMO.
3. S.139 (96th Congress): Comprehensive Health Care Reform Plan of 1981: Senators Schweiker and Hatch	Requires employers to offer multiple choice option to employees. Employer contributes same amount for each employee regardless of the cost of the plan selected by the employee (fixed dollar subsidy).
4. H.R.850 (97th Congress): National Health Care Reform Act of 1981: Rep. Gephardt	Requires provision of health care contributions either through employers or government. Employer-based coverage would include an option for a tax-exempt refund for employees who select qualified plans costing less than their employer's excludable contribution. Requires multiple choice option: opportunity for individuals to choose from a variety of qualified plans based on their cost, quality, and method of delivering care.
5. H.R.1114 (97th Congress): Rep. Lagomarsini	Establishes a National Voluntary Health Insurance Plan. Abolishes nearly all regulatory controls currently in place. Participants in this plan would be offered an HMO option.
6. H.R.4666 (97th Congress): Voluntary Medicare Option Act: Representatives Gradison and Gephardt	Establishes a voucher program as an optional alternative to the current Medicare program. Payments on behalf of Medicare eligibles to qualified plans would be based on the average cost of health plans for each of certain actuarial categories in a given health care area. If payments on behalf of eligible individuals are greater than the premiums of a qualified plan in which such individuals are enrolled, plans could rebate (up to certain limits) such amounts to such individuals.
7. S.1509 (97th Congress): Competitive Health and Medical Plan Act: Sen. Heinz	Provides for different fixed dollar subsidies for different "classes" of individuals (defined by demographic, socio-economic and health status factors) who are eligible for Medicare. Subsidies are to be paid on a prospective basis directly to the qualified "competitive" health plan which the program participant (consumer) has elected to join. Defines the basic health services which must be made available to the consumer. Provides for 30-day open enrollment periods once a year; provides for multiple choice option.

Annotated bibliography

19

Given the large body of literature relating either directly or indirectly to the subject of competition in the financing and delivery of health care, criteria were developed in order to determine the relevance of any article for inclusion in the annotated bibliography. Five criteria were used; to be selected for annotation, a paper must meet one or more:

1. The research or issues discussed in the selected articles are *relevant* to the topic.
2. The data and methodology used in the selected articles appear *appropriate* for the hypotheses being tested.
3. The subject matter covered or research methodology is an *important* contribution to the field.
4. The results are *useful* for answering questions regarding the presence or effects of competition.
5. The article is *representative* of work or research on a given topic.

These criteria have been applied to the documents acquired and reviewed throughout this project. It should be recognized that, to some extent, these choices are subjective. For this reason, the consultants to this project and the Project Officer were closely involved in the development and revisions of the annotated bibliography.

Altman, S.H. and Sochowitzky, E. "The Cost of Ambulatory Care in Alternative Settings: A Review of Major Research Findings." *Annual Review of Public Health* 2 (1981):117-143.

The literature on the subject of hospital-based ambulatory care costs as compared with the costs of delivering equivalent care in other settings is reviewed in this article. The authors begin by reviewing the problems of data comparability and reliability, as they relate to the measurement of cost and utilization. Most ambulatory care cost reports are not comparable with each other, or with other facilities' records, due to differences in accounting practices, physician compensation methods, allocation bases, number of cost centers utilized, and distributions between direct and indirect costs. Most researchers analyze the cost of ambulatory care in a single care site. As a result, one cannot generalize from the findings. The patient visit is the most common measurement unit; hence, patient mix issues cannot be adequately addressed. The lack of adequate, comparable data across sites inhibits a full assessment of ambulatory care reimbursement policies.

Altman, S.H. and Wallack, S.S. "Making Hard Choices in the 97th Congress: Opting for a Prudent Buyer Approach." *Medical Care* 19 (January 1981):1-2, 126.

In this article, the authors argue that the response of the federal government to rising expenditures for Medicare and Medicaid should be through a "prudent buyer" approach rather than through cuts in eligibility. Under a prudent buyer approach, Medicare and Medicaid programs would determine the rate to be paid for particular services, or go a step further and restrict eligibility to the least costly institutions. Such a system is expected to have significant impacts, particularly on teaching hospitals. Such institutions may respond either through increased interest in alternative types of care or through expansion of existing income sources.

Anderson, K.B. et al. *Physician Control of Blue Shield Plans: A Further Discussion of the Issues*. Washington, D.C.: Federal Trade Commission, January 1981.*

This is a revised version of an earlier study of the impact of physician control on the performance of Blue Shield plans which reports new findings resulting from alterations in the model and estimation methodology. The result of these alterations is to reduce the robustness of their previous conclusions. A positive, significant relationship between fees and physician control occurs only when the control is exercised by a formally organized group of physicians, such as a medical society or medical service bureau. Other definitions of physician control produce much weaker results.

*Also see Kass and Pautler (Summer 1981)

Arnould, R.J. and Eisenstadt, D. "The Effects of Provider-Controlled Blue Shield Plans: Regulatory Options." In *The New Approach to the Economics of*

Health Care, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

Blue Shield plans may enjoy regulatory tax advantages over commercial insurers and/or may be faced with local medical society control over plan reimbursement policies. This paper describes, theoretically and empirically, the circumstances under which physicians' fees may be raised as a result of these features of Blue Shield plans. A model of the health insurance market is presented and empirical tests of the hypotheses are conducted, using surgical fees as the dependent variable. The authors conclude that only when regulatory tax advantages are combined with medical society control over reimbursement policies of Blue Shield plans are significantly higher surgical fees induced.

Arrow, K.J. "Uncertainty and the Welfare Economics of Medical Care." *The American Economic Review* 53 (December 1963):941-973.

In this article, the author discusses the failure of the medical care market. The author contends that virtually all the special features of this industry stem from the prevalence of uncertainty and risk. The operations of the actual medical care market are compared with those of an ideal system which has available, not only commodities and services, but also insurance policies against all conceivable risks. The basic principles of an optimal insurance scheme are presented along with the problems of developing such a system for the medical care area. These problems include moral hazard, alternative methods of payment, third-party control over payments, administrative costs, predictability and insurance, pooling of unequal risks, gaps and coverage. The author concludes that the failure of the market to insure against uncertainties has created many social institutions in which the usual market assumptions do not hold; the medical care market is one example.

Association of American Medical Colleges. *Price Competition in the Health Care Marketplace: Issues for Teaching Hospitals*. Washington, D.C.: Association of American Medical Colleges, 1981.

This monograph provides a basis for discussing the potential impact of competition on teaching hospitals by describing how teaching hospitals would be viewed by policymakers under a competitive structure, describing price competition within the context of alterations of other environmental and policy variables, and identifying critical issues for teaching hospitals under a competitive structure.

Auster, R.D. and Gordon, J.G. "Individual Responsibility Incentives for the Health Sector." In *Policy Analysis and Deductive Reasoning*, edited by G. Tullock and R.E. Wagner. Lexington, Massachusetts: Lexington Books, 1978.

In this article, the authors argue that, unless there is a drastic national reorganization of incentives in the industry, health insurance may further distort the health care market, resulting in even higher inflation than presently exists. They propose a two tiered restructuring of reimbursement processes. The first tier is designed to produce incentives

to economize on all patient charges except the physician fee. The second tier focuses on the physician's fee. Thus, both tiers are output-based compensation plans. Compensation is directed from the patient to the physician who, in turn, pays the medical facility, giving the physician an incentive to learn about alternatives in an effort to control costs.

Auster, R.D. and Oaxaca, R.L. "Identification of Supplier Induced Demand in the Health Care Selector." *Journal of Human Resources* 16 (Summer 1981):327-342.

The statistical difficulties in empirically testing the hypothesis that physician, hospital, or any other input supply induces increased demand for health services through a demand shift are illustrated. The statistical problems associated with theoretical modeling of supplier induced demand results not from the theoretical structure of the model but rather from the "accident" of high multicollinearity among the predetermined variables. Additionally, the authors illustrate the difficulties with use of cross-sectional data to test such hypotheses: (1) wage and employment rates across areas are highly correlated; and (2) there is little dispersion in both wage and employment rates across areas. For these reasons, the authors suggest that caution is necessary in interpreting the common tests of the supplier induced demand hypothesis which use cross-sectional data.

Bailey R.M. "From Professional Monopoly to Corporate Oligopoly: The Clinical Laboratory Industry in Transition." *Medical Care* 15 (February 1977): 129-146

The transition of the private, nonhospital clinical laboratory market from a local monopoly structure dominated by pathologists to a national oligopoly controlled by a few large corporations is described in this study. Pathologists dominated the clinical laboratory market for years because laboratory testing was viewed as part of the practice of medicine. Under the pathologists' direction, there was little price cutting; relative value scales were used to protect the pricing structure; output was restricted in the name of quality assurance. Increasing automation, growth of the demand for medical care, and the development of prevention programs have encouraged entry by large corporations. The author sees the benefits of such growth of corporate control of the ownership of clinical laboratories as potentially eliminating trade restraints, allowing significant growth, and reducing prices through price rivalry. On the other hand, the disadvantages are the potential for price increases with an oligopolistic structure, and reduction of ease of entry due to economic barriers.

Benham, L. and Benham, A. "Regulating Through the Professions: A Perspective on Information Control." *Journal of Law and Economics* 18 (October 1975):421-447.

Restrictions on commercial information flows due to professional restraints result in decreased competition and

higher service prices. A two-equation model is used to investigate: (1) the net impact of professional control on the cost of eyeglasses, as measured by three different indices; and (2) the relationship between the estimated price of eyeglasses and the probability of purchasing eyeglasses within one year. Data concerning eyeglass prices, sources of eyeglasses, quantities purchased, family income, and other demographic variables are taken from the 1970 Health Interview Survey. Indices of professional control are constructed from cross-sectional state data. All three indices of professional control are significantly correlated with both the prices paid for eyeglasses and the frequency with which individuals obtain the service. Prices are estimated to be 25 to 40 percent higher in states with a high degree of professional control. These higher prices significantly reduce the probability that an individual will purchase eyeglasses within one year.

21

Benham, L. et al. "Migration, Location, and Remuneration of Medical Personnel: Physicians and Dentists." *Review of Economics and Statistics* 50 (August 1968):332-347.

The objective of this study is to investigate how well the distribution of the national stock of "medics" (physicians and dentists) among states correlates with the distribution of population within these same states. Investigation is also made of the influence of other variables such as effective demand for medical service, barriers to migration, and the locational preferences of the physician or dentist on physician locational patterns. The results of the study indicate that in every year studied (from 1930 to 1960) the major determinant of the number of medics in a state is its population size. The findings suggest that medics' choices of location are more responsive to population size than to per capita income. The number of physicians in a state is also found to be positively correlated with high barriers to entry, as measured by failure rates on licensing exams. For dentists, the relationship between licensing exam failure rates and numbers of dentists is negative but not significant. Therefore, the authors conclude that the responsiveness of dentists in terms of locational choice is tempered by licensing restrictions, whereas, for physicians, licensing appears to have little impact.

Berki, S.E. and Ashcraft, M.L.F. "HMO Enrollment: Who Joins What and Why: A Review of the Literature." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):588-632.

This paper presents a framework for analyzing the HMO enrollment decision and summarizes the available literature. The review of the literature focuses on two decisions: (1) the choice between an HMO and traditional insurance; and (2) the choice between a prepaid group practice (PGP) and an individual practice association (IPA). The authors indicate that existing studies are characterized by lack of comparability and often poorly designed measures and methodologies. Findings appear to indicate that broad coverage, lower expected costs of utilization, and assured access are the principal features that individuals consider to be the advantages of HMOs. The disadvantages are limita-

tions on choice of provider, absence of information, and spatial disadvantages of a centralized delivery organization. Weak evidence suggests that HMO enrollees tend to have lower per capita income than do members of traditional insurance plans. Closed-panel HMOs are most likely to attract enrollees who do not have established physician-patient relationships, who are new to a community, and who have large families. Little or no information is available on HMO maturation and multi-HMO competition or on the consequences of multiple, differentially priced benefit packages within the HMO.

Berki, S.E. et al. "Enrollment Choice in a Multi-HMO Setting: The Roles of Health Risk, Financial Vulnerability, and Access to Care." *Medical Care* 15 (February 1977):95-114.

Results of an analysis of enrollment choices when four alternative health plans are offered are reported. One open-panel, two closed-panel HMOs, and Blue Cross and Blue Shield were offered. No evidence of adverse self selection is found. Findings suggest that expected out-of-pocket costs are associated with choice of health plan. Enrollees choosing HMO plans tend to be younger with large families and lower incomes than Blue Cross and Blue Shield enrollees. The only difference found between those who chose open- or closed-panel HMOs was that consumers who chose open-panel plans were more likely to have had an existing relationship with a private physician. These results provide no indication of the impact of premium differentials on health plan selection, since the premium cost to subscribers was fully paid by the employer.

Berry, R.E. *On Excess Capital Accumulation in the Hospital Industry*. Waltham, Massachusetts: University Health Policy Consortium, 1979.

This paper discusses the issue of excess capitalization in the hospital industry. First, a definition of the term is presented, reasons for its existence are given, and then some available data are analyzed to assess whether excess capitalization does exist in the hospital industry. The results are ambiguous; in fact, the author feels that no data set would allow a definitive conclusion that the rate of capitalization is too high. The proportion of hospital investment to total has not continuously increased. Three possible reasons for these results are presented; first, they could be an artifact of plant assets data used to generate the investment series; second, capital accumulation may not be reflected in these data; third, it is conceivable that the data present the true picture.

Bice, T.W. "Risk Vulnerability and Enrollment in a Prepaid Practice." *Medical Care* 13 (August 1975):698-703.

"Risk vulnerability"—an individual's subjective expectations of future needs for medical care—is compared with "economic vulnerability"—an individual's subjective expectations of future out-of-pocket costs of medical care services. The employee will assess the desirability of alternative health insurance plans after considering both risk and economic vulnerability. Thus, an individual in

moderately good health with several small children requiring routine primary care visits might be expected to select a prepaid plan in order to reduce the expected out-of-pocket costs. Bice tests this hypothesis by examining associations between enrollment in a prepaid group plan and indicators of risk vulnerability for families for whom the expected out-of-pocket cost differences are zero and those for whom out-of-pocket cost differences are positive when the two plans are compared. Data for a poverty population are examined. Findings suggest that enrollees make economically rational decisions.

Bishop, C.E. *Nursing Home Behavior Under Cost-Related Reimbursement*. Waltham, Massachusetts: Center for Health Policy and Research, Brandeis University, 1979.

A model of the nursing home is extended to allow for incentives created under a reasonable cost-related reimbursement mechanism based on individual facility costs. Tests are made to examine the responsiveness of certain firm-specific variables to such a reimbursement scheme. For-profit firms are assumed to maximize profits subject to a regulatory constraint; nonprofit firms and government providers maximize a utility function depending on total patient days supplied and nursing intensity. The constraint on the firms' optimizing behavior is the private demand rate and cost functions faced by the firm. The firm's public price is modeled as a function of variables affecting provider cost. Service intensity of care is included explicitly in the demand, cost, and rate functions. Data are taken primarily from the annual survey of all licensed long term care facilities conducted by the Massachusetts Department of Public Health in 1977. Results indicate fewer private days (of patient care) are supplied when the price of public patient care is higher. Increased numbers of nursing hours significantly increase costs. Providers who choose to supply more nursing hours per patient day are paid at higher public rates, in line with their higher costs. However, the empirical models also indicate that providers offering more intensive nursing care serve more private patients and have lower occupancy rates than those which serve mainly public patients.

Blackstone, E.A. "Market Power and Resource Misallocation in Medicine: The Case of Neurosurgery." *Journal of Health Politics, Policy and Law* 3 (Fall 1978):345-360.

The purpose of this article is to examine the extent to which excess capacity exists in the neurosurgery profession. Empirical evidence is produced to support the contention that significant excess capacity exists. Consequences of excess capacity are seen as resulting in higher costs. Causes of this excess capacity are: growth of medical knowledge, price discrimination in surgical specialties, high status, and growth of health insurance. The author concludes that the neurosurgery market has performed like a cartel with free entry, which results in increasing excess capacity. A policy prescription of increased competition is proposed for the profession in order to reduce the excess capacity.

Blair, R.D. et al. "Economies of Scale in the Administration of Health Insurance." *Review of Economics and Statistics* 57 (May 1975):185-189.

The purpose of this paper is to examine the administrative cost structures of commercial insurers to determine whether scale economies exist. In order to do this, the authors have attempted to construct average cost functions which allow for constant or decreasing costs. The data used are obtained from the 1971 Argus Chart of Health Insurance, with a sample of 307 observations for each year during the 1968-1970 period. By fitting one linear and three nonlinear functional forms of average administrative costs, the authors find strong evidence of scale economies. They also find, contrary to their expectations, that mutual firms have lower average administrative costs than for-profit stock firms.

Blair, R.D. et al. "Blue Cross-Blue Shield Administrative Costs: A Study of Non-Profit Insurers." *Economic Inquiry* 13 (June 1975):237-251.

This study investigates the administrative cost experience of Blue Cross and Blue Shield plans by indirectly testing whether nonprofit firms have an incentive to achieve technical efficiency. In addition, examination is made of the costs that each type of plan incurs as a carrier for the Medicare program and the potential cost efficiencies engendered by a merger of the two types of plans. Data are drawn mainly from the *Blue Cross and Blue Shield Fact Book: 1972* and other unpublished sources. The results fail to associate any variables except product mix with average administrative costs. The authors suggest that this finding results from a lack of incentive to minimize costs as a result of the Blue's nonprofit form of organization. There also appears to be no relationship between administrative costs in the Blue's private business and its Medicare business. Finally, there seem to be significant efficiencies to be gained by merging Blue Cross and Blue Shield plans. Merging appears to reduce administrative costs between 20 to 26 percentage points at the mean.

Bloom, P.N. and Stiff, R. "Advertising and the Health Care Professions." *Journal of Health Politics, Policy, and Law* 4 (Winter 1980):642-656.

This paper is concerned with how competition, fees, quality, and the variety within the health care market may be altered by removing advertising restrictions. The authors assume that the courts will require that advertising be permitted for "routine" care and "basic factual information" in all media. They argue that at least moderate amounts of primary care and preventive care advertising will be done after the removal of advertising restrictions, and conclude that such advertising will promote lower real fees, more cost-effective practices, more variety in available medical technologies, and higher quality health care.

Blumberg, M.S. "Health Status and Health Care Use by Type of Private Health Coverage." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Winter 1980):633-655.

The causes of lower hospital utilization by enrollees in prepaid group practice (PGP) are investigated using data from the 1975 Health Interview Survey to compare those in PGPs with individuals enrolled in all other private health insurance plans, including Individual Practice Associations (IPAs). The evidence on health status of PGP enrollees indicates they report slightly more total restricted activity days due to chronic or acute conditions than do others. In other ways, the health status of the members of each of the two groups was similar. Several hypotheses are offered by the author which could explain the different utilization patterns observed. However, no evidence is provided to support or refute these speculations.

Blumstein, J. and Zubkoff, M. "Public Choice in Health: Problems, Politics and Perspectives." *Journal of Health Policy, Politics and Law* 4 (Fall 1979):382-413.

The development of goals in the health policy area requires that competing values be identified and explicitly discussed. This article puts emphasis on the impacts that different theoretical perspectives have on the identification of problems and formulation of solutions in the health care field. The market-oriented view separates the goals of equity and income transfer from efficiency issues. The authors support such a view, urging reconsideration of the use of decentralized forms of decision making. The adoption of substantive standards has not been effective because of measurement problems of progress and because of definitional difficulties. These problems are exemplified by reference to three often mentioned goals of health care policymakers: low cost, assurance of quality, and ease of access.

Bovbjerg, R.R. "Competition vs. Regulation in Medical Care: An Over-drawn Dichotomy." *Vanderbilt Law Review* 34 (May 1981):965-1002.

In this article, the author argues that viewing the solution to the need for cost containment in the health care market as a choice between regulation and competition is simplistic. Instead, the present weaknesses in the health care system should be assessed and corrective incentives proposed. The focus should be on what constitutes the most desirable mix of competition and regulation.

Brown, L.D. "Competition and Health Cost Containment: Cautions and Conjectures." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):145-189.

The author contends in this article that current proposals to strengthen competition in the health services market suffer from confusion among fact, hypothesis, and evidence. There is at present little basis for estimating the cost containment potential of various health care plans. Much more evidence is required before generalizations can be made from the Kaiser Plans, for example, or from the fact that competition among health care plans appears to work in Minneapolis. Policy advocacy, it is argued, should take a distant back seat to policy analysis.

Brown, D.N. and Lapan, H.E. "Analysis of Physicians' Input Decisions." In *Issues in Physician Reim-*

bursement, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

24

The question of whether physicians utilize ancillary personnel efficiently is addressed in this study. The authors re-examine Reinhardt's work on physician production functions (1972, 1975) to retest the empirical validity of his conclusion that physicians significantly underutilize such personnel. A specification very similar to that of Reinhardt's is estimated using the 1976 Physician Practice Costs Survey. By calculating the value of marginal products and input wages for all, solo and group physicians and their aides, physicians are found to use their own time relatively efficiently. Some inputs (nurses and physician assistants) are underutilized while others are overutilized (secretaries and clerks). The primary policy conclusion is that group practice of physicians should be encouraged since group physicians are found to produce substantially more visits than those in sole practice.

Cady, J.F. *Restricted Advertising and Competition: The Case for Retail Drugs*. Washington, D.C.: American Enterprise Institute, 1976.

The objective of this study is to trace the effects of state statutes and administrative rules restricting price advertising of prescription drugs and then to estimate empirically the benefits to be gained by rescinding such market restraints. Using data from a 1970 survey of over 1,900 pharmacies, the author concludes that restrictions on drug advertising have served to benefit only pharmacists themselves. Service levels, with one exception, are no higher in regulated states than in unregulated states. On the other hand, prices of prescription drugs are significantly higher in regulated states as contrasted to unregulated states. These results support the author's contention that in regulated states, pharmacists have been able to maintain a legalized cartel. Multiplying the average price differences between regulated and unregulated states by the prescription volume in regulated states results in an estimated national consumer benefit from deregulation of drug advertising of between \$134 and \$152 million in 1970.

Christianson, J.B. *The Competitive Impact of Health Maintenance Organizations: Minneapolis-St. Paul*. Excelsior, Minnesota: InterStudy, 1978.

This paper describes the impact of HMO development on traditional providers in the Minneapolis-St. Paul area. Blue Cross-Blue Shield and the Hennepin County Medical Society have responded to HMO development by sponsoring their own HMOs. Hospitals have been involved in the formation of HMOs and have competed for HMO patients by offering rate discounts. Businesses have encouraged HMO development by offering multiple health benefit options for their employees and contributing fixed dollar amounts to employee options. The HMOs operate in a legal and regulatory framework which is not overly restrictive at the present time at either the state or local level. However, the author expresses some concern that as their

competitive position worsens relative to HMOs, traditional providers may devote greater effort and resources toward securing protective legislation and regulatory judgments.

Christianson, J.B. and McClure, W. "Competition in the Delivery of Medical Care." *New England Journal of Medicine* 301 (October 11, 1979):812-818.

In this article the authors describe the development and growth of several health care plans in Minneapolis-St. Paul, and the impact of increased competition among the plans on costs of, access to, and consumer satisfaction with medical services in the Twin Cities. The Minneapolis-St. Paul medical-care market contains two features considered essential by the authors for the development of competition in the community: (1) it is common practice for companies to offer their employees more than one HMO as an alternative to their traditional insurance plans; and (2) most employers contribute a fixed dollar amount to whichever benefit option is chosen. Data are presented which illustrate lower-than-average hospitalization rates and HMO costs per enrollee in the Twin Cities area.

Clark, R.C. "Does the Nonprofit Form Fit the Hospital Industry?" *Harvard Law Review* 93 (May 1980):1416-1489.

In this article, the author critically examines the basis for the favored legal status accorded to nonprofit hospitals. The study begins with some of the fundamental obstacles to the effective functioning of the health care industry and then establishes a framework for analyzing the role of nonprofit hospitals by considering alternative models of organizational behavior. The author then examines whether any justification exists for nonprofit hospitals by analyzing the impact that organizational form may have on the endemic problems. The evidence presented does not establish convincingly that nonprofit hospitals serve as a beneficent response to problems of imperfect knowledge faced by patients and payers. In fact, it lends some credence to the theory that nonprofit hospitals aggravate the consequences of imperfect knowledge. The evidence also appears to demonstrate that involuntary cross-subsidization of medical services takes place in the nonprofit hospital. The author concludes that since the legal favoritism currently accorded to nonprofit hospitals is not based on sound reasoning and data, it should be discontinued as part of a four part program proposed by the author which includes control of cross-subsidization and strengthening the hand of the consumer in health care decision making.

"Competition in the Health Services Market." Hearings before the Subcommittee on Antitrust and Monopoly, Committee on the Judiciary, U.S. Senate, May 14, 15, 17, 29, 30, and July 10, 1974.

These hearings sought to build a record which demonstrates the extent of competition in four major areas of the health care service industry - planning, organization, delivery, and financing. The intent was to develop a series of suggestions as to areas where restraints on trade could be replaced with competition. Primary areas targeted for consideration were: (1) the restraints of trade imposed by

government regulations; (2) restraints imposed by the American Medical Association and affiliated groups; and (3) alternatives to present cost-plus reimbursement systems.

Conrad, D.A. and Emerson, M.L. "State Dental Practice Acts: Implications for Competition." *Journal of Health Politics, Policy and Law: Special Section on Dental Policy* 5 (Winter 1981):610-630.

The study examines the effects of three provisions of state dental practice acts on competition in the dental services market. These provisions include those regulating the advertising and solicitation of patients, dental auxiliaries, and the organization and ownership of dental practices. Preliminary empirical tests are performed to estimate the effects of these provisions on the fees and net income of dentists. Limits on the number of offices per dentist and absence of reciprocal licensing arrangements were found to be associated with higher fees and higher net incomes among dentists. Restraints on the number of hygienists per dentists were positively associated with dental fees, but not with net income. Restrictions on advertising were related to higher net incomes, but not fees.

"Containment of Hospital Costs: A Strategic Assessment." *Medical Care* 16 (Supplement October 1978).

This supplement reviews the principal explanations for the current rate of inflation in the health care sector, examines the principal strategies used to reduce hospital expenditures, analyzes the literature describing implementation strategies, and compares their relative effectiveness. Recommendations emanating from this review include the promotion of HMOs, a commitment to prospective reimbursement for hospitals, aggressive pursuit of alternatives to traditional hospital care, less reliance on cost-sharing, and the need for higher quality data.

Cromwell, J., et al. "Physician Administrative Costs and Medicaid Participation." In *Physicians and Financial Incentives*, edited by J. R. Gabel, et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

This paper investigates the determinants of physician participation in public programs such as Medicaid and the organization and administration of the physician practice itself. Data are derived from a nationwide survey of 2,000 private practice, fee-for-service physicians. Salaried physicians and those in prepaid group practices are excluded. Results indicate that decisions with regard to fees are centralized in group practices, but the service price is determined by the individual physician. A physician's decision to enter a solo practice or a group practice appears not to be affected by the marginal utility of work and leisure (at least as they are measured in the model). Specialists are more likely to enter group practice than are general practitioners. Management-averse physicians, physicians in rural areas, and nonwhite physicians are most likely to enter solo practice. An examination of the determinants of physicians' Medicaid participation indicate that the most important determinants are the reimbursement levels, the

administrative burden generated by Medicaid, and the prices of nonphysician inputs. Where private insurers are more generous, program participation falls.

*See also Sloan et al. (1978)

David, J.L. "Health Professionals' Access to Hospitals: A Retrospective and Prospective Analysis." *Vanderbilt Law Review* 34 (May 1981):1161-1202.

This note explores the hospital privileges issue, particularly the interrelated pressures of intra- and inter-professional restraints, government regulation, and medical technology. It describes the historical development of current operating procedures which define the relationship between physician and hospital. Existing case law in the area of hospital privileges is examined, along with a discussion of the health policy implications of various alternatives.

Davis, K. and Russell, L.B. "The Substitution of Hospital Outpatient Care for Inpatient Care." *Review of Economics and Statistics* 54 (September 1972):109-120.

The purpose of the study is to investigate the properties of the demand for hospital outpatient care and to explore the possibility of inducing the substitution of outpatient for inpatient care. A demand function for outpatient visits is estimated by regression methods using data on 48 states for the year 1969. The authors' results show that the demand for outpatient care is quite responsive to economic factors, specifically the price of outpatient care. Demand for outpatient care is also found to be sensitive to inpatient occupancy rates; that is, when inpatient facilities are crowded, physicians see patients on an outpatient basis that they might otherwise see on an inpatient basis. Finally, the statistical analysis reveals that important cross-elasticities exist between the prices of inpatient and outpatient care and the amounts demanded. The authors suggest that altering the relative prices of the two types of care may make a substantial difference in the total costs of providing hospital care. It is noted that while the authors take into account such sociodemographic factors as age distribution and migration rates in their demand estimates, they do not address the effect of health status on the demand for inpatient or outpatient care.

Dutton, D.B. "Patterns of Ambulatory Health Care in Five Different Delivery Systems." *Medical Care* 17 (March 1979):221-243.

This study examines the relationship between the growing diversity of health care settings and the extent to which patients are actually able to choose between alternative service packages. Patterns of ambulatory care are examined among five alternative delivery systems within the Washington, D.C. area: (1) fee-for-service solo practice; (2) fee-for-service group practice; (3) prepaid group practice; (4) public clinics; and (5) hospital outpatient departments. The impact of the organizational setting on patient behavior is assessed independently of the payment mechanism. Sources used primarily by the poor, including hospital

outpatient departments, emergency rooms, and clinics, tended to have high structural and financial barriers and low rates. In addition, physicians were encouraged to increase the volume of follow-up services of patient-initiated use. Prepaid systems, on the other hand, encouraged patient access and did not inhibit physician-initiated care.

Dyckman, Z.T. *A Study of Physicians' Fees*. Washington, D.C.: Council on Wage and Price Stability, March 1978.

This study examines the determinants of the long-term trend of rising physicians' fees and expenditures for physicians' services. The author sees the causes as due to rising consumer income, restrictions on supply and competition, the growth of coverage and comprehensiveness of health insurance, implementation of government sponsored health insurance programs for the poor and aged, the increase in insurance coverage of physicians' services, and changes in the specialty distribution of physicians. The trends in physician fee inflation are described and then the medical care component of the Consumer Price Index is examined for possible biases. Finally, the trends in physicians' income and expenses are examined with respect to such factors as specialty, geographical location, and board certification. Surgical fees are found to be highest in the West, in large urban areas, and in areas experiencing high population growth rates. The author concludes that in the 1950s and early 1960s, high rates of inflation are attributable to the anticompetitive practices of organized medicine. Since 1965, the per capita supply has increased substantially and the primary causes of continued fee inflation have been the growth of private and public health insurance coverage and changes in the methods of insurance payment for physicians' services.

Egdahl, R.H. and Walsh, D. C. "Industry-Sponsored Health Programs: Basis for a New Hybrid Prepaid Plan." *New England Journal of Medicine* 296 (1977):1350-1353.

This article discusses industry-sponsored prepaid health plans which combine in-company provision of services with external services from fee-for-service multispecialty groups. Company management would contract for services with a separate physician corporation and would provide modern management techniques to streamline the organization of medical services provision. Physician risk-sharing and tight peer review are said to be necessary if opportunities for cost savings are to be maximized.

Egdahl, R.H. et al. "The Potential of Organizations of Fee-For-Service Physicians For Achieving Significant Decreases in Hospitalization." *Annals of Surgery* 186 (September 1977):388-399.

This study investigates the potential for IPA-HMOs to reduce hospitalization rates favorably. Eight IPA-HMOs and two FMCs (Foundations for Medical Care) were surveyed and their operating characteristics described. Three of the IPA-style plans achieved substantial reductions in patient hospitalization after the plan's introduction.

Characteristics of these plans which appear to influence hospital utilization are enrollee prepayment, risk sharing by physicians, and effective peer review.

Eggers, P.W. "Risk Differential Between Medicare Beneficiaries Enrolled and Not Enrolled in an HMO." *Health Care Financing Review* 1 (Winter 1980):91-99.

The utilization behavior and reimbursement experience of a group of Medicare beneficiaries before and after joining an HMO is compared with a comparable Medicare population under fee-for-service. Medicare provides incentive reimbursements to HMOs which enroll Medicare beneficiaries on a risk option and provide care at a lower cost than expected. Results of this case study show that the Medicare HMO enrollees had a hospitalization rate over 50 percent below the comparison group. They also had lower use of Medicare Part B services than the comparison group. The findings are from a single case study. The nature of the marketing and enrollment practices of the HMO may have influenced the type of Medicare beneficiaries enrolled there, which may constrain the generalizability of these findings.

Ehrlich, I. and Becker, G.S. "Market Insurance, Self-Insurance, and Self-Protection." *Journal of Political Economy* 80 (July/August 1972):623-648.

Expected utility and indifference curve analysis are combined to develop a theory of the demand for insurance where the emphasis is on the interaction between market insurance, "self-insurance," and "self-protection." Consideration is given not only to the incentive to insure but also to how much insurance is purchased under varying opportunities, including the alternatives of self-insurance and self-protection. The first part of the paper develops a model of market insurance demand, the second part adds the alternatives of self-protection and self-insurance to the model. The models support the concept of market insurance and self-insurance as substitutes. On the other hand, market insurance and self-protection can be complements; as with self-insurance, a fair market price of market insurance encourages an expenditure on self-protection. For this reason, the authors conclude that moral hazard is not an inevitable result of market insurance. Under certain conditions, insurance can lead to a reduction in the probabilities of hazardous events.

Eisenberg, B.S. "Information Exchange Among Competitors: The Issue of Relative Value Scales for Physicians' Services." *Journal of Law and Economics* 23 (October 1980):441-460.

The issue of relative value scales (RVSs) is used to show how rule-of-reason criteria can be used to develop testable hypotheses that then can be used by the courts. The assertion with regard to RVSs is that they tend to reduce price dispersion and raise fees. On the other hand, physicians and others using these scales argue that such mechanisms are necessary for settling fee disputes, reducing transaction costs, and estimating other physicians' fees when making referrals. A model which uses the "econom-

ics-of-information" perspective is used to test the validity of these contradictory assertions. A judgment hinges on whether there is a positive and significant relationship between the existence of RVSSs and fee levels. A three-equation model is specified where physicians' use of RVSSs, fee dispersion, and fee levels are simultaneously determined. Data on current fees, use of relative value scales, and other physician characteristics come from a 1976 survey by the AMA of nonfederal physicians engaged in solo practice. The results indicate that RVSSs are associated with lower fee dispersion but not directly with higher fee levels. The greater use of RVSSs is related to the prevalence of third parties, but not to reimbursement levels. Fee levels appear to be more influenced by supply and demand forces, rather than by institutional factors such as the use of RVSSs.

Eisenstadt, D. and Kennedy, T.E. "Control and Behavior of Nonprofit Firms: The Case of Blue Shield." *Southern Economic Journal* 48 (July 1981):26-36.

The operational efficiency or inefficiency of Blue Shield plans is considered in this paper. Consideration is given to the effects of physician control of Blue Shield on administrative efficiency. This is due to the fact that physicians may act as residual claimants with an interest in administrative efficiency. The degree of physician control over Blue Shield is hypothesized to affect negatively administrative costs in plans operating in market areas where discretionary administrative behavior is possible. Data are taken from the *Blue Cross-Blue Shield Factbook* and from material published by the National Association of Life Underwriters. The results indicate that the presence of a residual claimant in nonprofit organizations does reduce administrative costs. Specifically, administrative costs as a percentage of premiums is negatively affected by the percentage of physicians on a Blue Shield plan's board, where the plan enjoys a tax advantage. In plans without such an advantage the composition of the board of directors is not significantly related to the level of administrative costs.

Ellwood, P.M. "Alternatives to Regulation: Improving the Market." In *Controls of Health Care*. Washington, D.C.: National Academy of Sciences, 1975.

The assumptions underlying the HMO strategy are discussed in this article, along with additional steps that might be taken to strengthen the competitiveness of the medical care market. The underlying assumptions of the HMO strategy are the ability of the health care industry to be structured, the effectiveness of prepaid health care organizations on a national scale, the feasibility of a competitive health care market, and the reductions of further regulatory needs with the success of HMOs. Additional proposals are also suggested by the author. These proposals include the provision of consumer information, the improvement of hospital efficiency, and the continued support of competitive delivery systems.

Enthoven, A.C. "Consumer-Choice Health Plan." *New England Journal of Medicine* 298 (March 23 and

March 30, 1978):650-658 (Part 1) and 709-720 (Part 2).

In this two-part article, the author first presents a discussion of the causes of inflation and inequity in the U.S. medical system, alternatives for cost control, and an analysis of proposals for national health insurance. This is followed by a description of the author's consumer-choice health plan, a proposal based on regulated competition in the private sector. The major factors behind the rapid increases in health care costs, it is argued, are the perverse incentives inherent in the tax-supported system of fee-for-service for doctors, cost reimbursement for hospitals, and third-party intermediaries to protect consumers. Two broad alternatives for cost control are discussed: (1) direct economic regulation; and (2) cost control through incentives and competition. Based on available evidence, the author concludes that direct economic regulation is likely to raise costs and retard beneficial innovation. Instead, the author proposes changing financial incentives by creating a system of competing health plans in which physicians and consumers can benefit from more efficient use of health care resources.

Enthoven, A.C. "Consumer-Centered vs. Job-Centered Health Insurance." *Harvard Business Review* 57 (January/February 1979):141-52.

A fundamental change from a job-centered to a consumer-centered health insurance scheme is necessary to help promote economic competition in health services. Perverse incentives in the present health care financing system include: fee-for-service payments to physicians, cost-plus reimbursement for hospitals, and the almost universal existence of health insurance. The author contends that competition works better than regulation, as indicated by overbedding despite certificate-of-need laws, lowered costs under competition, the responsiveness of competitive markets to individual consumer preferences, and the lack of motivation on the part of the regulatory system to promote efficiency or equity. The author then recapitulates the basic tenets of his Consumer Choice Health Plan: annual choice of enrollment in a variety of plans, equal financial assistance to each person regardless of plan chosen, a uniform set of rules for each plan, and the offering of one or two standard plans for each community.

Enthoven, A.C. *Health Plan: The Only Practical Solution to the Soaring Cost of Medical Care*. Reading, Massachusetts: Addison-Wesley Publishing Co. 1980.

This book details the elements of the author's Consumer Choice Health Plan, which he sees as a means of changing from a health care system dominated by cost-increasing incentives to a system where providers are rewarded for finding ways of giving better quality care at less cost. The trend toward increasing health expenditures is discussed, along with the hypothesized causes of the increase. These include increased insurance coverage, the tax laws, the fee for service concept, physician dominance, cost reimbursement for hospitals, the passive cost containment role of third party payers, the increase in the numbers of physicians, technology, and the aging of the population. An

explanation of the elements of free markets are then presented with an explanation of why they do not exist in the health care sector and why there will never be a totally free market. On the other hand, the author provides an explanation for his contention that regulations generally fail to overcome the distorting force of cost-increasing incentives. With this background, he presents the precepts of the Consumer Choice Health Plan, and compares it to other proposed alternative financing plans.

Enthoven, A.C. *Design for Comprehensive Reform of Medicare*. Memorandum to Assistant Secretary Robert Rubin, M.D., July 1, 1981.

This memorandum proposes a new design for a phased reform of the Medicare system, based on a competitive market approach. The new Medicare Program would pay a fixed prospective premium to the participating health care financing and delivery plan of the consumer's choice. The contribution would be based on the average cost to the government of a beneficiary's medical care under Parts A and B and the net of the Part B premium paid by the beneficiary. Contracts between HCFA and the health care financing and delivery plans must meet the following criteria: (1) cover the list of services provided by Medicare; (2) include a limit on each beneficiary's out-of-pocket expenses for covered services; (3) receive revenue both from the federal contribution (varying with predicted medical need) and an individual premium contribution. The program would have the following characteristics:

- Contractual arrangements between HCFA and several health plans to cover all Medicare beneficiaries
- Plans setting their own premiums
- An annual open enrollment by HCFA
- Mandatory enrollment of new Medicare recipients in the new program
- A mandate by HCFA to encourage participation of an alternative health plan and
- Establishment of an efficient mechanism for resolving disputes between plans and beneficiaries.

Enthoven, A.C. "Supply Side Economics of Health Care and Consumer Choice Health Plan." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

The author contends that the literature on cost-containment strategies for the health care system has ignored the supply side of the system. Operating on the demand side by increasing cost sharing and other mechanisms will not necessarily eliminate all inefficiencies within the health care system. The author defends the Consumer Choice Health Plan as an attempt to propose rules which will create incentives for efficiency on the supply side. The goal is to transform the present noncompetitive system into one of competing comprehensive health care financing and delivery organizations.

Evans, F.O. "Physician-Based Group Insurance: A Proposal for Medical Cost Control." *New England Journal of Medicine* 302 (June 5, 1980): 1280-1283.

A new proposal for containing medical costs is described; the proposal delegates the responsibility for managing a patient's care to the primary care physician. The primary care physician chooses an insurance plan for his or her patients. The patient selects a physician and pays a premium to the insurance plan chosen by the physician. The patient receives all direct care from this physician and all referrals for specialty care and ancillary services must be made through him or her. The patient can change provider and the provider can change insurance contractors at any time. Subsidizing the claims of expensive patients may be required to counteract possible selection bias against sicker patients. The author believes there are strong reasons to presume that such plans would control costs: (1) physicians would learn the costs of hospital services or the charges of their consultants; (2) physicians with high premiums might lose patients to physicians who, through their style of practice, have lower premiums; and (3) the plan would permit and reward innovation.

Evans, R.G. "Supplier-Induced Demand: Some Empirical Evidence and Implications." In *The Economics of Health and Medical Care*, edited by M. Perlman. London: MacMillan & Company, 1974.

The theoretical significance of the physician as the patient's agent is examined in this article. The author argues that the medical care market cannot be dichotomized into simply demand and supply factors; rather, there must be allowances for shifts in the demand curve in response to supplier behavior. The theoretical implications of this argument are then traced. These include the fact that an increase in physician stock may lead to increases in both output and price. Using a data base of Canadian physicians for both 1969 and 1971, the implications of this conceptual model are tested. The results do indicate a tendency for medical prices to be higher in Canadian provinces with high physician-to-population ratios.

Feldman, R. and Begun, J.W. "The Effects of Advertising Restrictions: Lessons from Optometry." *Journal of Human Resources* 13 (Supplement 1978):247-262.

In this paper the authors examine the effect of advertising bans on the price of optometric examinations. Advertising is viewed as an information medium which enables consumers to search for lower prices, to the relative disadvantage of high cost, low volume sellers. Self-interest leads these sellers to support bans on advertising. An empirical section shows that price is 16 percent higher in states that ban optometric and optician price advertising, when examination length, procedures, and office equipment are held constant. The two advertising bans work by interaction. Both must be present to raise significantly the price of eye examinations.

Feldman, R. and Greenberg, W. "Blue Cross Market Share, Economies of Scale, and Cost Containment Efforts." *Health Services Research* 16 (Summer 1981):175-183.

Tests of the hypothesis that market share and the absolute number of enrollees in Blue Cross plans are positively associated with cost containment efforts such as prospective reimbursement, pre-admission testing, and concurrent review are presented in this paper. If market share is related to monopsony power, this can give Blue Cross leverage in dealing with providers. On the other hand, larger market shares, if due to cost advantages, can eliminate the need to engage in cost controls. The results suggest that Blue Cross plans with a large number of enrollees are more likely to use the three cost containment techniques. In addition, states that have enacted prospective reimbursement laws appear to be more active in pushing the Blues toward implementing cost containment measures. However, when market share is used as the dependent variable, only the concurrent review variable is significant and positively signed. The authors conclude that there are economies of scale to cost control efforts, but high market share is not associated with increased cost consciousness.

Feldstein, M.S. "The Rising Price of Physicians' Services." *Review of Economics and Statistics* 52 (May 1970):121-133.

The author presents several alternative models of the market for physicians' services and then tests some of these alternatives using an aggregated time series for the years 1948-1966. Each model investigated contains a supply function relating the quantity of services supplied by the physician to the price of the services and a series of other variables. These other variables can be grouped by three basic factors: (1) the cost per unit of service provided; (2) the marginal importance of additional net income from private practice; and (3) the availability of interesting and/or unusual cases. The study's results show that the pricing and output decisions of physicians cannot be explained by traditional economic models of the firm, where profits are assumed to be maximized. Doctors have restrained price increases to assure continued excess demand, implying that doctors have the ability to control both price and output. Greater use of ancillary medical personnel is found to increase costs slightly more than output. However, the small sample size, the imperfect nature of the data, and potential methodological problems require that these results be considered preliminary and subject to revision.

Feldstein, M.S. "A New Approach to National Health Insurance." *The Public Interest* 23 (Spring 1971):93-105.

The author proposes Maximum Risk Insurance (MRI) as a government-supported insurance program to cover all medical expenditures above an income related deductible. For expenditures below this level, government-guaranteed loans would be available. The consequence of implementing this proposal would be an increase in cost con-

sciousness of consumers and, thus, price competition would be restored to the medical market.

Feldstein, M.S. "Hospital Cost Inflation: A Study of Nonprofit Price Dynamics." *The American Economic Review* 61 (December 1971):853-872.

The causes of hospital inflation are examined by modeling use, cost, and expansion patterns of hospital inpatient services over time and across locations. Despite the non-profit nature of the hospital industry, this analysis hypothesizes that inflation can be explained as a series of price adjustments to excess demand within the market. A formal twelve-equation model of the behavior of the hospital industry is presented and then estimated using a pooled cross-section of time series samples of ten annual observations for each state. The results indicate that per capita admissions and the mean hospital stay per case are sensitive to alterations in price, the latter demand variable also being sensitive to income alterations as well. Increased supply of general practitioners appears to decrease demand for admissions and longer stays while the increased availability of other specialists has the reverse effect. Increased bed capacity increases admissions and mean length of stay. The author concludes that the source of hospital inflation does not stem from increased input costs but rather through demand pressures induced by increases in personal incomes, specialist availability, and insurance coverage.

Feldstein, M.S. "The Welfare Loss of Excess Health Insurance." *Journal of Political Economy* 81 (March/April 1973):251-280.

Evidence is provided to support the contention that Americans are generally overinsured against health expenses. With a reduction in coverage, the loss due to increased risk is outweighed by the gain due to lower costs and reduced purchase of excess care. The first two sections of the paper develop and estimate a structural equation for the demand for health insurance. This study uses a cross-section of time series data for individual states for the years 1959 to 1965. The parameter estimates indicate that an increase in the price of care significantly increases the demand for insurance. The next section conceptually examines the interdependence between insurance and the price of care, finding that changes in the two factors are mutually reinforcing on one another. More insurance increases the price of care and a higher price of care increases the demand for insurance. Estimates of the welfare gain to be found by raising average coinsurance rates suggested net gains in excess of \$4 billion in 1969.

Feldstein, M.S. and Friedman, B. "Tax Subsidies, the Rational Demand for Insurance, and the Health Care Crisis." *Journal of Public Economics* 7 (1977):155-178.

The purpose of this paper is to assess the extent to which the tax subsidy for health insurance increases the demand for health insurance and then to examine the general equilibrium results of the increased demand for health insurance. A model of the optimal demand for insurance is developed for the case where the extent of insurance

coverage affects the magnitude of the random loss. An empirical examination is then made of the effects of the tax subsidy for a variety of different combinations of risk aversion, price elasticities, and nonmonetary costs per unit of care. This is done by comparing insurance options chosen, with the current tax subsidy, to the options which would have been chosen had there been no subsidy. The results indicate that the tax subsidy causes a substantial increase in the extent of insurance. The growth of insurance, in turn, positively influences the demand for health care, correspondingly increasing the price of care. This increase in the price of care, in turn, further affects the optimal coinsurance rate.

- 30 **Feldstein, P.J.** *Health Association and the Demand for Legislation: The Political Economy of Health*. Cambridge, Massachusetts: Ballinger Publishing Co., 1977.

An analysis of the goals and behavior of selected health associations is presented in this volume. A model of the demand for health care legislation is described where health associations are assumed to attempt to maximize net income of their members. On this assumption, health professional organizations are hypothesized to favor policies that: (1) increase demand for their services; (2) enable firms to be reimbursed for their services as price discriminating monopolists; (3) lower the price (or increase the quantity) of complementary inputs; (4) raise the price (or decrease the quantity) of substitutes for their services; and (5) restrict additions to their supply. The political activities of the American Medical Association, the American Dental Association, the American Nurses Association, the American Hospital Association, Blue Cross, the Association of American Medical Colleges, and the American Association of Dental Schools are analyzed using the model.

- Ferber, B.** "An Analysis of Chain-Operated For-Profit Hospitals." *Health Services Research* 16 (Spring 1971):53-64.

This report presents data documenting the current status of chain-operated hospitals, and compares chain-operated hospitals with other privately owned for-profit hospitals and with nonfederal, nonprofit, short-term general, and special hospitals. Data, for the year 1969, pertaining to several aspects of operation are presented: number of hospitals, number and location of beds, approval status and presence of selected services, average length of stay, occupancy and staff ratios, and expense ratios. From the data presented, it can be concluded that the hospitals acquired and operated by the chains differ from other for-profit hospitals in that: (1) they tend to be larger; and (2) they are more often located in metropolitan areas. The chain hospitals, especially in the smaller size categories, compare well with or exceed the other for-profit hospitals in accreditation and Medicare certification. They had higher personnel ratios and higher levels of expense per inpatient day and expense per admission than the other for-profit hospitals and, except in the largest hospitals, higher payroll expense per employee. Fewer clear distinctions were noted between the chain-operated and nonprofit hospitals.

- Fraundorf, K.C.** "Competition in Blood Banking." *Public Policy* 23 (Spring 1975):219-40.

Industrial organization analysis is used to clarify the appropriate role of competition in blood banking. The author illustrates the difficulties with making the present hybrid industry structure of profit and nonprofit firms operate efficiently. It is argued that nonprice competition among blood banks, in the absence of the profit motive, has led to: (1) simultaneous shortages and surpluses; and (2) a structure of prices that further distorts the allocation of blood resources. His suggested alternatives are either a unified blood banking system, such as that found in Britain, or a perfectly competitive one with effective product quality regulation.

- Frech, H.E. III.** "The Property Rights Theory of the Firm: Empirical Results from a Natural Experiment." *Journal of Political Economy* 84 (February 1976):143-152.

This study examines data on Medicare insurance claims processing by for-profit and nonprofit intermediary firms. Economic theory indicates that nonprofit firms will operate less efficiently than profit firms. This study attempts to measure empirically the impact of alternative property rights specifications on operational costs. Data are based on claims data from nonprofit and for-profit Medicare Part B intermediaries made available by the Social Security Administration in 1973. The results indicate that for-profit firms are more efficient at processing Medicare claims than nonprofit firms. Nonprofit firms incur per-dollar processing costs which are 45 percent higher than nonprofit firms and their processing time takes 80 percent longer. Some of this inefficiency is shown to be due to lack of economies of scale.

- Frech, H.E. III.** "Market Power in Health Insurance: Effects on Insurance and Medical Markets." *Journal of Industrial Economics* 28 (September 1979):55-72*

The effects of varying degrees of competitiveness in the insurance industry on the completeness of insurance and medical demand are examined, concentrating on the Blue Cross and hospital insurance market. The author first develops a model of the demand for insurance with moral hazard under competitive supply conditions, where the insurance is supplied by a nonprofit insurer with monopoly power and owned by the medical care providers. Greater market power on the part of provider-controlled nonprofit health insurers leads to sales of more complete health insurance. Second, an empirical test is made of the hypothesized positive relationship between the market power of an insurer and the completeness of the insurance purchased in the market. Then, the completeness of the insurance package is related to the cost of medical care. Data used are state cross-sections for 1969. The results indicate that where Blue Cross has more market power, offerings are adjusted to raise the average level of completeness. The more complete insurance leads to a significant increase in the demand for medical care.

*Also see Frech (1979); Frech and Ginsburg (1978).

Frech, H.E. III. "Blue Cross, Blue Shield, and Health Care Costs: A Review of the Economic Evidence." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

The basic theme of this paper is that the Blues, because of their special tax and regulatory advantages, have obtained some monopoly power within the industry. This market power has resulted in market distortions harmful to consumers. A description of the Blues and their regulatory and tax advantages is first given and, then, previous research on the subject is discussed. This research appears to conclude that: (1) the Blues offer health insurance which is more comprehensive than most commercial plans; (2) tax and regulatory advantages give the Blues market power over the commercials; and (3) more research is needed on the effects of physician dominance over Blue Shield plans and Blue Shield's allowable fee policies. The policy recommendations are to remove the Blues' special advantages and to prevent them from colluding.

Frech, H.E. III and Ginsburg, P.B. "Imposed Health Insurance in Monopolistic Markets: A Theoretical Analysis." *Economic Inquiry* 13 (March 1975):55-70.*

The efficiency effects of imposing insurance in a monopolistic market are analyzed. When such monopoly elements are introduced into the medical care market, market prices resulting from the imposition of insurance will depend on the type of insurance benefit used. Additionally, the type of benefit affects the structure of the medical care market which in turn affects the price of services. Service benefits (where the insurer pays a percentage of the total claim) tend to reduce consumer search and the production of information. Also, such a benefit structure will tend to reduce cross-elasticities of demand, thus altering the market structure toward pure monopoly. This has the effect of increasing prices to a larger extent and increasing output to a lesser extent than would be true if the type of benefit structure was not included in the model. An indemnity benefit structure (when an insurer makes a fixed payment per unit) always results in lower prices than a service benefit structure at any given output. However, such a structure can distort the mix of medical services. Under a UCP (Usual, Customary, and Prevailing) plan, the model predicts that the market price for care will rise to the point at which the marginal value of medical care to consumers is zero, resulting in chronic inflation.

*Also see Frech (1974); Frech and Ginsburg (1978).

Fuchs, V.R. "The Supply of Surgeons and the Demand for Operations." *Journal of Human Resources* 13 (Supplement 1978):35-56.

The purpose of this paper is to test the "physician induced demand" hypothesis through multiequation, multivariate analysis of differences in the supply of surgeons and the

demand for operations in various locations in the U.S. A demand equation is specified which includes variables thought to determine demand and then adding a "predicted" physician supply variable. The Health Interview Survey is the source for surgical utilization data; the data are stratified into 22 locational areas based on region and the urban/nonurban nature of the area. Surgeon supply data are taken from the AMA's publication, *Distribution of Physicians in the U.S.* Cross-sectional regressions are run for the years 1963 and 1970. The findings suggest there is support for the hypothesis that an increase in the supply of surgeons does have a positive effect on the demand for surgery.

Fuchs, V.R. and Kramer, M.J. *Determinants of Expenditures for Physicians' Services in the United States 1948-1968*. New York: National Bureau of Economic Research, 1972.

The determinants of the 328 percent increase in health care expenditures for physician services over the 20 year period, 1948 through 1968, are analyzed. The study is in two parts. First, the authors statistically decompose the growth in per capita expenditures, dividing the time period into two subperiods, 1948-56 and 1956-66. Examination is made of changes in causal factors such as price, insurance coverage, income, number and types of physicians, and medical technology. The second part develops and tests a formal model to analyze physician and patient behavior. The study's major conclusion is that supply factors, technology, and the number of physicians appear to be the most significant predictors of changes in the utilization of and expenditures for physician services. Elasticities of consumer demand with respect to income, price, and insurance are all small relative to the effect of the number of physicians on consumer demand.

Fuller, N.A. et al. "Medicaid Utilization of Services in a Prepaid Group Practice Health Plan." *Medical Care* 15 (September 1977):705-737.

Results of a program to provide medical services to a Medicaid population through a prepaid group practice are reported. All Medicaid beneficiaries were enrolled voluntarily. Results indicate that utilization of services declined and cost savings over the three year period were 37 percent.

Gabel, J.R. and Redisch, M.A. "Alternative Physician Payment Methods: Incentives, Efficiency, and National Health Insurance." *Milbank Memorial Fund Quarterly/Health and Society* 57 (Winter 1979):38-59.

The objective of this article is to examine the literature on alternative physician pricing methods and their implications with respect to medical practices. First, the authors review the three major physician payment methods (fee-for-service, capitation, and salary) used in the United States. Second, they discuss the two alternative models explaining physician pricing behavior which appear in the health economics literature—the profit maximizing and utility maximizing models. Finally, they catalog the effects of the

three major physician reimbursement methods on five selected dimensions of medical practice including: (1) utilization of physician and nonphysician services; (2) treatment setting; (3) location decision; (4) specialty choice; and (5) efficiency of an individual physician's practice. They conclude that the dominant fee-for-service system in the U.S. results in perverse incentives. The ability of physicians to impact on the demand for their services inhibits efforts to change specialty and geographic physician distributions and to control the growth in physician and hospital costs.

Gertman, P.H. "Physicians as Guiders of Health Services Use." In *Consumer Incentives for Health Care*, edited by S.J. Mushkin. New York: Prodist, 1974.

The impact of physicians' decisions on the use of medical services and the reasoning behind these actions is the focus of this paper. The four areas where physician decision making has a prominent role are: (1) ambulatory health care; (2) hospital admissions; (3) medical decision practices; and (4) quality of care. In each area, the relevant literature is reviewed. The author's opinion is that physician decision making will tend to be biased toward overutilization of services, in order to be certain that every possible approach has been considered.

Ginzberg, E. "The Competitive Solution: Two Views: Competition and Cost Containment." *New England Journal of Medicine* 303 (November 6, 1980):1112-1115.

The author describes and criticizes Enthoven's Consumer Choice Health Plan proposal for containing health care costs. He feels the portion of Enthoven's proposal which calls for an alteration of present tax incentives requires careful consideration. First, he makes the point that such a step means that the government is intruding on prior collective bargaining arrangements. Free-market advocates ignore the extent to which hard buyer-seller bargaining is already occurring. Both employers and unions are already interested in saving money. Second, Enthoven has underestimated the barriers to the growth of alternative health plans. Finally, there is little evidence to indicate that consumers purchase professional services primarily on the basis of price. For these reasons, the author rejects Enthoven's proposal because it will not be able to increase cost-efficient delivery substantially nor slow the expansion of health care costs in a way that will be satisfactory to the American public.

Ginsburg, P.B. "Altering the Tax Treatment of Employment-Based Health Plans." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):224-255.

Options that alter the tax treatment of health insurance as a method to contain health care costs are examined. Two major models are reviewed: (1) Reducing tax subsidies would induce more cost-sharing and cause patients to reduce utilization or choose care more carefully; and (2) Reduced tax subsidies would create increased HMO enrollment. These arguments are analytically examined. The author then discusses options which have been proposed.

One option would require employers to offer multiple choices of plans, paying an equal amount toward the employee's choice. Employees choosing a low cost option would receive a rebate. The problems of adverse selection and the difficulty in ensuring that meaningful choices are offered reduce the potential benefits from this proposal. A second option discussed is limiting the amount of employer contribution to the health benefit plans when such contributions are not taxable to employees. Consequences of implementing this option would be a reduction in medical care spending and increased tax revenues.

Ginsburg, P.B. *An Analysis of the National Health Care Reform Act of 1981 (H.R.850)*. Congressional Budget Office, The Congress of the United States, September 30, 1981.

In this report the author presents an analysis of the major elements of the National Health Care Reform Act of 1981. Specific components of the bill that are examined include: limits on the amount of employer contributions for health insurance that could be excluded from employees' taxable incomes; tax credits to those without employer contributions or with contributions less than the maximum excludable from taxation; open enrollment which would require qualified health plans to accept all applicants and charge identical premiums to all persons within an actuarial category; and the use of Medicare and low income vouchers. Some of the major findings from the analysis are that the bill would reduce private spending on medical care, primarily through incentives to participants in employment-based insurance plans to accept more cost sharing provisions, and also through encouraging enrollment in HMOs. Utilization rates and prices of medical services are expected to be somewhat lower than under current policies. The impact of the bill on the federal budget would be primarily on the revenue side, with a revenue loss of \$14.5 billion in fiscal year 1984, increasing to \$19.4 billion in 1986. Those individuals who will gain the most under the bill would include persons not currently receiving employer-paid health insurance and those who would qualify for low income vouchers but who are currently ineligible for Medicaid. Individuals who will lose the most include those with large employer contributions to health plans and those currently receiving Medicaid who would not qualify for vouchers.

Goldberg, L.G. and Greenberg, W. "The Effect of Physician-Controlled Health Insurance." *Journal of Health Politics, Policy and Law* 2 (Spring 1977):48-78.

By examining the trial record of an antitrust case against the Oregon State Medical Society (decided in 1952), the authors seek to determine why health insurers have not exerted more pressure to control health care costs. The trial record documents the consequences of the introduction by the state medical society of a statewide prepaid medical service plan, the Oregon Physicians Service, on the abilities of third party payers to contain costs.

Goldberg, L.G. and Greenberg, W. "The Competitive Response of Blue Cross to the Health Maintenance

nance Organization." *Economic Inquiry* 18 (January 1980):55-68.*

The hypothesis that the presence of HMOs in an area provides effective competitive pressure on Blue Cross is tested using data on the Federal Employees Health Benefits Program. Several analyses are conducted to examine whether: (1) the HMO competitive presence will induce Blue Cross to reduce hospital utilization; and (2) the HMO competitive presence will induce Blue Cross to offer a richer benefits package. HMO market share is included in the empirical estimation as a measure of the extent of the competitive presence of HMOs. Results of the empirical analysis are consistent with expectations that Blue Cross plans react to the presence of HMOs. The evidence on reduced hospital utilization is relatively strong. However, the evidence that Blue Cross offers increased benefit plans in areas with greater HMO market shares is not as strong.

*See also Goldberg and Greenberg, 1977 and 1979.

Goldberg, L.G. and Greenberg, W. "The Determinants of HMO Enrollment and Growth." *Health Services Research* 16 (Winter 1981):431-438.

This study examines why HMO enrollment and growth have varied greatly among states. Using Tobit analysis, market factors such as per capita income and population, as well as regulatory factors such as capital and reserve requirements for HMOs and statutes restricting HMO advertising, are related to 1976 HMO market share and the change in HMO market share from 1966 to 1976. The results of the analysis indicate that market factors have a stronger effect on HMO growth than do regulatory factors. States with more mobile populations were found to be more conducive to HMO growth. Higher levels of hospital costs also improve the environment for HMO growth and the establishment of HMOs. The authors conclude that public policymakers concerned about HMO enrollment and growth should focus their attention on economic and demographic factors rather than legal impediments.

Goldberg, S.A. and Greenberg, W. "Third Party Cost Containment and the Physician-Patient Relationship: A Case Study." *Journal of Community Health* (Winter 1981).

An analysis of the efforts of a small third party firm, U.S. Administrator of Los Angeles (USA), to contain health care costs by intervening in the physician-patient relationship is the focus of this paper. Existing private and public sector cost containment activities are described, dividing these activities into those which impact on the health care delivery system and those which impact on physicians directly. Second, a description of USA's cost containment programs is provided. Third, a USA enrollee's medical history is traced for a year to evaluate the USA's intervention capabilities. The authors conclude such intervention is extremely difficult on the basis of the single example. There is the probability of a negative reaction on the part of the patient if the relationship to the physician is questioned. In addition, the third party must incur the transactions costs of challenging provider claims, especially given the difficulty

of the claims review process. Two other compounding factors are the reluctance of physicians to be "second guessed" and their potential recourse to local medical societies.

Green, J. "Welfare Losses from Monopoly in the Drug Industry: The Oklahoma Antisubstitution Law." *Antitrust Law and Economic Review* 5 (Spring 1972):97-119.

The author seeks to estimate empirically the welfare losses engendered in the Oklahoma drug market by entry barriers due to patents, brand name marketing, and laws that restrict competition among retail pharmacies. The Oklahoma antisubstitution law means that a druggist cannot substitute a generic equivalent if the prescription calls for the brand name version. The price of a generically equivalent drug is assumed to be the competitive price and the price of the brand name version is defined as the monopoly price. The difference between the two prices is the monopoly overcharge due to the monopoly power of the brand name producers. On average, prices of brand name drugs are found to be three times higher than their generic equivalents. On the basis of a survey requesting information about eight drugs in a selected sample of Oklahoma pharmacies, the author estimates that the welfare loss due to the antisubstitution law is about \$1.5 million per year.

Greenberg, W. "Provider-Influenced Insurance Plans and Their Impact on Competition: Lessons from Dentistry." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

The objective of this paper is to examine the behavior of Blue Shield and other third party insurers in the dental care market. This market, in contrast to medicine, appears to exhibit substantial cost containment activity among insurers. Blue Shield competes against the Delta Dental Plan (established by dentists), Blue Cross, and commercial insurers. The historical development of dental insurance plans is sketched, together with a discussion of the types of cost containment activities in which they engage. The effects of such cost containment activities are catalogued in terms of the increase in dental fees over time, the number of services performed, and per capita expenditure on dental care. Changes in the market shares for each competing insurer are discussed. Finally, differences in dental and health insurance markets are considered. According to the author, all of these factors account for the impact that competition among insurers has had on the market for dental insurance in contrast to that for medicine.

Greenspan, N.T. and Vogel, R.J. "Taxation and Its Effect Upon Public and Private Health Insurance and Medical Demand." *Health Care Financing Review* 1 (Spring 1980):39-43.

The authors of this paper contend that elimination of tax subsidies to the buyers and sellers of private health insurance would slow the upward pressure on prices in both the public and private sectors. This in turn would

promote control of government expenditures and improve access for Medicare and Medicaid patients. The discussion focuses on how present tax subsidies potentially increase demand for health care, and includes a review of current literature on the subject.

Hall, T.D. and Lindsay, C.M. "Medical Schools: Producers of What? Sellers of Whom?" *Journal of Law and Economics* 23 (April 1980):55-80.

34

The decisionmaking process in medical schools is explicitly modeled in order to assess the validity of the long-held belief among economists that medical schools seek to restrain the supply of physicians. The authors use multiple regression analysis to estimate the impact of a series of market variables including training costs, grants and donations, and applicant demand on medical school annual enrollments and tuition levels. The sample consists of data from sixteen medical schools for the period 1959 to 1973. The authors pose an alternative to the previously mentioned conspiratorial model of medical school behavior. Medical schools are viewed as competitive producers of trained physicians who are then "sold" to donors. The regression results support prior specified hypotheses by indicating that medical schools are responsive to a variety of market signals. Increases in donations or decreases in training costs encourage higher enrollments and lower tuitions; increases in prospective student demand encourage higher enrollments and tuitions.

Harris, J.E. "The Internal Organization of Hospitals: Some Economic Implications." *Bell Journal of Economics* 8 (1977):467-482.

The economic consequences of the organizational structure of hospitals are explored. The author postulates that a hospital is actually two firms in one: a medical staff (demand division) and an administration (supply division). Each of the two "firms" has its own objectives, managers, pricing strategies, and constraints. He concludes that, within this framework, the medical staff and the administration are engaged in a noncooperative internal struggle which is usually resolved, not by communication and bargaining, but by the short-run allocation process itself. This internal allocative scheme is subject to breakdowns, especially when the medical staff's internal demands exceed short-run capacity. The author further concludes that current regulatory policy is almost exclusively directed at the "supply" side of the hospital, and that, without consideration of the demand side, such policy is doomed to failure. Ultimately, the internal structure of the hospital itself needs to change.

Harris, J.E. "Pricing Rules for Hospitals." *Bell Journal of Economics* 10 (Spring 1979):224-243.

The complex pricing structures set by hospitals and the reasons for these price structures are explored. The author explores the evidence, advantages, and disadvantages of cross subsidization among routine care, ancillary services,

and special procedures. He contends that one reason why hospital prices should deviate from costs is that the hospital, by manipulating its prices, can compensate for significant distortions and inequities in health insurance coverage. That is, the hospital's policy of cross subsidization performs an important corrective pricing function. The author derives pricing rules based on this public enterprise pricing theory and then compares the theoretically calculated rates with those actually observed in a case study hospital. Welfare gains achieved by moving from average cost pricing to cross subsidization among ancillary procedures, special procedures, and daily accommodations are potentially significant. These results suggest that the frequently cited norm of average cost pricing may have significant disadvantages.

Havighurst, C.C. "Health Maintenance Organizations and the Market for Health Services." *Law and Contemporary Problems* 35 (1970):716-795.

The policies needed to obtain the best possible implementation of the HMO strategy are addressed. The author presents the argument that trade restraints have, in the past, prevented the market from functioning with close to its potential effectiveness and that restoration of a market regime offers the best hope for solving the nation's health care problem. Specifically, it is expected that independent HMOs can substantially improve the performance of the entire health care system by their ability to impose cost restraint on physicians in caring for patients. Competition from aggressive and cost-conscious HMOs would introduce pressure to control costs in the fee-for-service sector. Even if HMOs never achieve a large market share, the author contends that the availability of a lower-cost alternative delivery system may impose an effective check on the exercise of monopoly power. As a result, lower prices and greater efficiency would occur in the market. The conclusion is that, "even if HMO-type care should appear inferior in some respect to fee-for-service medicine, it still has a vitally important market function to perform" (p. 795).

Havighurst, C.C. "Regulation of Health Facilities and Services by 'Certificate of Need'." *Virginia Law Review* 59 (October 1973): 1143-1232.

The author probes whether there is a realistic basis for expecting desirable results from the introduction of certificate-of-need laws. It is his contention that, for several reasons, administrative certification of need is unlikely to be effective in achieving cost-control objectives. These reasons include the difficulties connected with implementing a regulatory program, the possibility that if inflationary growth is constrained in one area it will balloon out in another, and the fact that regulation necessarily represses market forces promoting efficiency and innovation. Nonetheless, the author offers some suggestions for drafting an effective certificate-of-need law. These recommendations include assigning responsibility for the program with the agency bearing political responsibility for the cost of care under Medicaid, limiting coverage to hospitals, exempting HMO hospital facilities, being open in policy formulation,

relying on real planning, expressing commitment to increasing competition, assuring possibility of entry by providers giving less comprehensive care, and setting a fixed expiration date to the law.

Havighurst, C.C. "Federal Regulation of the Health Care Delivery System." *University of Toledo Law Review* 6 (Spring 1975):577-590.

This article describes the genesis of federal regulation of the health care system, the political environment of regulation, and the costs of regulation. These latter costs include often insufficient statutory powers, cumbersome bureaucratic responsibilities, the impossibility of controlling all inputs and outputs of the regulated firm, the possibility that positive costs will be hidden from public view, the difficulty with developing a large enough constituency to promote change, the protection of regulated interests against outside competition, and the encouragement of excessive societal investment in regulatory activities.

Havighurst, C.C. "Professional Restraints on Innovation in Health Care Financing." *Duke Law Journal* (May 1978):303-387.

The basic thesis of this article is that vigorous enforcement of the antitrust laws against certain concerted actions taken by physicians, hospitals, and other organized medical groups can have significant, positive effects on private cost containment efforts. The author contends that activities of organized medical groups have constrained the growth of innovative and more cost effective health delivery systems, such as HMOs, and discouraged structural changes in traditional insurance and other benefit plans. Financing programs acceptable to organized medicine have stimulated demand and foreclosed experimentation with ways to reduce the impact of this increased demand. Finally, he argues that private cost containment would be more rapid if insurance carriers were less deferential to the medical profession.

Havighurst, C.C. "Health Insurers and Health Care Costs: Can the Problem Be Part of the Solution?" *Health Communications and Informatics* 5 (1979): 319-338.

The willingness and ability of health insurers to redesign their benefit packages in order to contain costs are explored. Possible cost containment strategies are discussed, such as high copayments, limitations on the duration of hospital stay, second opinion requirements, prior insurer authorizations, utilization review, predetermination of benefits, inservice loans, cash benefits, alteration of malpractice rights, fee schedules, prior notification of hospital charges, adjustment of premiums according to hospital choice, payment by diagnosis, and inservice-provider contracts. The author believes the key to cost containment is the insurer-sponsored physician panel. Factors unfavorable to the development of such strategies include resistance on the part of the medical profession, third party payers'

disinterest, and the lack of consumer interest in cost containment.

Havighurst, C.C. "Prospects for Competition Under Health Planning-cum- Regulation." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

This paper discusses how and where regulatory and competitive strategies can coexist in the health care field. The author argues that a phased deregulation strategy is tenable and deserves support, given the fact that immediate deregulation is not a politically feasible option. A catalog of new legislative initiatives promoting competition in the health care area is provided, along with a description of certain legislative developments in the design of certificate-of-need regulation.

Havighurst, C.C. and Hackbarth, G.M. "Private Cost Containment." *New England Journal of Medicine* 9 (June 7, 1979):1298-1305.

This article repeats the authors' basic contention that a more competitive health care market is the best defense against increased government regulation. Private health insurers are in a good position to redefine their coverage to limit the rise in health care costs being engendered by their present coverage policies.

Havighurst, C.C. and Kissam, P.C. "The Antitrust Implications of Relative Value Studies in Medicine." *Journal of Health Politics, Policy and Law* 4 (1979):48-86.

The competitive effects (on the medical care market) of relative value studies (RVSs) promulgated by physician organizations are discussed. The focus is on the legal status of RVSs under federal antitrust law. There is support for the implication that, although no professionally sponsored RVS has been ruled unlawful, RVSs are inconsistent with the maintenance of competition in the health care market. Potential abuses of RVSs are cited as support: physicians' price fixing, manipulation of the health insurance system, and suppression of third-party cost containment initiatives. On the other hand, RVSs can be viewed in a procompetitive light as cost containment devices, technical services to third-party payers, and "public goods." The authors suggest these affirmative justifications have little merit, particularly since the supposed benefits can be obtained by schedules that are not sanctioned by organized medical groups. Increased competition among third-party payers can be expected by eliminating their reliance on RVSs for medical pricing formulas.

Hellinger, F.J. "An Empirical Analysis of Several Prospective Reimbursement Systems." In *Hospital Cost Containment: Selected Notes for Future Policy*, edited by M. Zubkoff et al. New York: Prodist (1978):390-400.

The findings of four evaluations of different prospective reimbursement systems are reviewed. The author stops short of drawing any definitive conclusions regarding the dampening effect of prospective reimbursement on hospital

inflation in the four experiments reviewed, since a lack of statistical significance and/or possible specification biases in the cost functions employed discouraged any conclusive interpretation of the potential and magnitude of cost savings. The study also highlights several factors which the author feels to be critical to an effective prospective reimbursement system. These include a uniform hospital accounting and budget information system, careful coordination between health planning and rate-setting, a focus on total hospital expenditures and costs per case rather than per item costs, the active participation of all third-party payers, and the evaluation of a reasonable exceptions process.

Helms, R.B. "Contemporary Health Policy Dealing with the Cost of Care." In *Contemporary Economic Problems*, edited by W. Fellner. Washington, D.C.: The American Enterprise Institute, 1978.

The economic behavior of medical markets is addressed in this paper in order to identify those aspects which distinguish this market from other industry markets. The discussion deals principally with three aspects: (1) the role of tax subsidies; (2) the scarcity of consumer information; and (3) the lack of market competition. The author concludes that the special aspects of the medical market can be explained by standard economic analysis. Rapidly increasing expenditures and prices are seen as being a result of the distorting effects of government subsidies. These subsidies have promoted a system where providers and consumers make decisions with little consideration about costs.

Hester, J. and Sussman, E. "Medicaid Prepayment: Concept and Implementation." *Milbank Memorial Fund Quarterly/Health and Society* 52 (Fall 1974):415-444.

There are distinct issues involved in adopting a prepayment program for the Medicaid population. Primary problems are that of creating enrollment incentives and turnover of the Medicaid population as eligibility status changes. In addition, it is essential to monitor prepaid group practices providing services to Medicaid populations, since incentives to provide quality care may be lower. Fiscal incentives to HMO performance must be considered and clearly stated. The authors suggest that concern should be directed toward assuring that Medicaid patients do not underutilize services and that they minimize out-of-plan use. The latter problem has been identified as a substantial one in the HIP-NY plan for Medicaid enrollees. The authors offer a range of approaches to implementation of prepayment for Medicaid clients based on experiences in New York and California. They recommend strongly that evaluation of Medicaid prepayment programs be conducted on a regular basis to determine performance and problems.

Hetherington, R.W. et al. *Health Insurance Plans: Promise and Performance*. New York: John Wiley and Sons, 1975.

This book represents the final report of a study which compared the performance of three major types of health insurers: commercial insurance company plans, provider

sponsored plans, and pre-paid group-practice plans. Two representatives of each type of plan (one small and one large) were chosen from the Los Angeles metropolitan area. The six plans studied were compared on the basis of the quantity of physician and hospital services used, the quality of services provided, consumer expenses and consumer satisfaction. The results indicate that commercial plans enroll persons with the lowest risk of illness. Ambulatory service use is similar for all plan types. The highest per capita volume is rendered in provider-sponsored plans. Hospital admission rates are highest in provider-sponsored plans and lowest among group plans. Hospital days per admission do not indicate any advantage to group plans. Out-of-pocket expenses are lowest in group practice plans and highest in provider-sponsored plans. Premiums are highest in these same group plans and lowest among commercial plans. Lowest costs are found in group practice plans and the highest costs in provider-sponsored plans.

Holahan, J. "Foundations for Medical Care: An Empirical Investigation of the Delivery of Health Services to a Medicaid Population." *Inquiry* 14 (December 1977):352-368.

Foundations for Medical Care/Individual Practice Associations (FMC-IPAs) are examined in this paper to determine whether this practice form provides an effective mechanism for long-term control of costs. The major problem with the FMC-IPA practice arrangement is that physicians in the association have an incentive to overprovide services. This is due to the fact that those physicians responsible for excessive provision will reap some remuneration for those services, while *pro rata* reductions in the events of a budget overrun apply to all physicians in proportion to their total billings. Using data from the California Medicaid program, empirical investigation of the effect of an FMC on provision of (nonhospital) medical services is undertaken. Results fail to demonstrate that the FMC had any utilization or cost reducing impact when compared with California Blue Shield plan experience. Reasons for this finding are suggested, including: (1) the capitation rate was set at levels which provided weak incentives to control utilization; (2) the FMC-IPA was not at risk for inpatient care; and (3) the FMC approach does not change the incentives facing the individual physician. The author concludes that peer review (the major utilization and cost control mechanism in an FMC-IPA) is unlikely to be a significant control on service provision.

Holahan, J. et al. "The Effect of Medicare/Medicaid Reimbursement on Physician Behavior: A Summary of Findings." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.*

The objective of this study is to analyze physicians' price and output decisions, emphasizing the effects of private fees and Medicare and Medicaid reasonable charge screens on services provided to Medicare and Medicaid patients. Data consist of all Medicare and Medicaid claims made during the last quarter of the 1972 to 1975 fiscal years for a

sample of 5,000 California physicians. The study is limited to solo, office-based physicians. Results indicate that programs which provide a floor on reasonable charges increase average actual charges. Second, any increases in the level of reasonable charges will have an inflationary impact on the actual fees of physicians who participate in the program. Third, a system which sets current reasonable charges as a function of past actual charges has the effect of creating an incentive for physicians to increase current charges in order to attain desired charge levels in the next period. Fourth, the Economic Stabilization Program (ESP) in California did succeed in lowering both the absolute charge levels as well as their rate of increase. Finally, there is evidence that physicians' supply of services to public patients is more sensitive to private fee levels than to program reasonable charges.

*Also see Hadley and Lee (1978-1979); Holahan *et al.* (1978); Hadley *et al.* (1979).

Holahan, J. and Feder, J. "Medicaid and Capitation Payments to Physicians." Working Paper No. 1298-3, March 1981, The Urban Institute, Washington, D.C.

This paper discusses potential problems facing Medicaid programs which seek to replace fee-for-service physician payment methods with capitation arrangements such as the capitated primary care network (CPCN), introduced by the SafeCo Insurance Company in the state of Washington. The CPCN is based on prepayment contracts with individual primary care physicians who are given an agreed upon capitation payment for each patient in their account and are expected to provide all required primary care services. The authors cite four general problems that may arise under such a system: (1) Physicians face incentives to enroll low risk, high net revenue patients and to refuse enrollment to high risk, high cost patients. (2) Physicians may attempt to minimize their own costs through increased referrals. (3) Physicians reimbursed on a capitation basis have an incentive to reduce the quality of care to minimize costs. (4) Capitation will be unattractive to individual or small group practice physicians because of an inability to limit risk by pooling a large number of patients. The authors conclude that the effect of a shift from fee-for-service to capitation on state Medicaid expenditures will depend on a multitude of detailed, critical decisions yet to be made.

Hornbrook, M.C. "Market Structure and Advertising in the U.S. Pharmaceutical Industry." *Medical Care* 16 (February 1978):90-109.

An empirical examination of the basic competitive characteristics of the pharmaceutical industry is presented in this paper. By first explaining the underlying dynamic features of market behavior within the industry, the author seeks to evaluate various policy options that could be used to increase the degree of structural competition and reduce "undesirable" promotional outlays. "Market dominance" is defined as the ability of the same group of established firms to influence price and output of the product from one time

period to the next. Therefore, the focus of the article is on dynamic patterns of marginal change in market shares. The products examined are finished dosage-form prescription drugs distributed through community pharmacies to consumers. Data are from a market research firm dealing with the pharmaceutical industry. The results indicate that larger markets are more stable with respect to domination than smaller markets, promotion has a net procompetitive effect, concentration is a substantial barrier to entry, innovation is a significant source of market power, rapidly growing markets tend to be dominated, but instability of market shares is associated with less dominance.

House, D.R. "A Full-Price Approach to the Dental Market: Implications for Price Determination." *Journal of Health Politics, Policy and Law: Special Section on Dental Policy* 5 (Winter 1981):593-607.

37

This study seeks to determine whether the positive correlations found between dental fees and provider density are due to the exclusion of patient waiting time in the model. The author hypothesizes that patients seek optimal fee and waiting-time combinations, not the lowest fee. Because of differences in patients' values of time, clients will demand different fee and waiting-time price configurations. The empirical model regresses fees on observed patient waiting time along with other components contributing to full price. The results indicate that the dentist's fee and the patient's office wait are inversely related. No significant relationship is found between full price and the dentist-to-population ratio. The author concludes that patients waiting time functions as a component of price and must be considered for a proper understanding of health care markets.

Hsiao, W. et al. "The Patterns of Physician Charges: Implications for Policy." In *Physicians and Financial Incentives*, edited by J.R. Gabel *et al.* Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

The patterns of fees charged by physicians are examined. The data base consists of claims records of insurance carriers in 24 states for the period between January 1971 and December 1971. The records include both Medicare and commercial claims. The results indicate that, in most states, physician fees do not adhere to any relative value scale. Physician fees are also widely dispersed and there is little evidence that price discrimination is being practiced to any degree.

Huang, L.F. and Rosett, R.N. "Redistribution of Income Through Blue Cross Community Related Premiums." Discussion Paper, June 1972, University of Rochester, Rochester, New York.

In an analysis of the effects of health insurance on expenditure for health services, the authors find a positive association between income and health expenditures levels. Therefore, an insurance premium which ignores this income effect is regressive in its effect on the income

distribution. Blacks spend less on health care, other things being equal, than do whites. The authors speculate that a premium which ignores race will redistribute income away from blacks and to whites.

Iglehart, J.K. "The Federal Government as Venture Capitalist: How Does It Fare?" *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):656-666.

38

The experience of the Office of Health Maintenance Organizations (OHMOs) in creating new private businesses (i.e., HMOs) is examined. The conflict between social goals and the creation of viable, self-sufficient businesses is identified as the critical problem to be faced. No firm conclusions with respect to performance of the OHMO program are reached. However, it is noted that OHMO funding has been used by private physicians to create Individual Practice Associations (IPAs) as a defensive measure against HMO development.

Joskow, P.L. "The Effects of Competition and Regulation on Hospital Bed Supply and the Reservation Quality of the Hospital." *Bell Journal of Economics* 11 (Autumn 1980):421-447.

The characteristics of the hospital bed supply planning problem is explored utilizing a simple queueing model which takes into account demand uncertainty, the internal organization of hospitals, nonprice competition among hospitals, and hospital regulation. The results indicate that interhospital competition induces hospitals to choose a higher average reserve margin than is observed when interhospital competition is reduced. Conversely, certificate-of-need regulations and attempts to regulate hospital budgets and rates by using prospective reimbursement criteria appear to constrain hospital bed supply decisions. The policy implications of the empirical results are that in a system where price competition does not play an important role, policies designed to facilitate entry and promote competition may have undesirable efficiency properties.

Juba, D.A. "Price Setting in the Market for Physicians' Services: A Review of the Literature." In *Health Care Financing Administration Grants and Contracts Report*, DHEW Publication No. (HCFA) 030129-79, 1979.

Recent research relating to the demand, supply, and pricing of physicians' services is reviewed. Both competitive and monopoly models of the physician services market are included and critiqued. Pricing equations are developed which relate pricing of services to various market characteristics. Finally, the study discusses the relationship between the price and quality of physician services. On the basis of this literature review, the author predicts that, because of further expansion of medical insurance coverage, physician fees will continue to increase at rates outstripping the rates for other goods and services.

Kass, D.I. and Pautler, P.A. *Staff Report on Physician Control of Blue Shield Plans*. Federal Trade Commission, Washington, D.C. (November 1979).*

In this report, the authors test for the presence and importance of the relation between physician control of Blue Shield plans and (1) the provider fee limitations set by the plans, and (2) the administrative costs of the plans. Plans which operate independently of physician influence are hypothesized to have lower fees and higher administrative expenses than those plans with greater physician control. UCR physician fee limits for a variety of procedures are regressed on a series of demand and supply factors variables, together with a series of measures of physician control. These measures of physician control are based upon examination of the selection procedures of members of the board. The results indicate a significant relationship between higher UCR rates and the physician control measures. Alterations in the model specification or in the definition of physician control do not alter the results significantly. On the other hand, there is little evidence of a relationship between physician control and administrative costs.

*Also see Kass and Pautler (1980).

Kass, D.I. and Pautler, P.A. "The Administrative Costs of Non-Profit Insurers." *Economic Inquiry* 19 (July 1981):515-521.

This note presents the results from a study in which the same administrative cost functions used by Blair *et al.* (1975) and Vogel (1977) are re-estimated using new data from 1976 and 1977. The data set includes all Blue Shield plans located in the United States which had not merged with a Blue Cross plan. In contrast to the earlier research, there is little evidence of significant economies of scale.

Kelly, E. et al. "An Examination of the Effect of Market Demographic and Competitive Characteristics on Gross Margins of Prescription Drugs." *Medical Care* 13 (November 1975):956-965.

The objective of this study is to determine the relationship between demographic and competitive characteristics and the pricing strategy of retail pharmacies. Price strategy is measured by dollar markup-on-retail and percentage markup-on-retail, this being the only component of the consumer price determined by the pharmacist. Data were collected from 29 community pharmacies in a large metropolitan area. The regressions illustrate that only the competitive aspects of the market area have a significant and negative relationship to percent markup-on-retail. Demographic characteristics of an area do not appear to affect markups significantly.

Kessel, R. "Price Discrimination in Medicine." *Journal of Law and Economics* 1 (October 1958):20-53.

In the first part of the paper, the author argues that the discriminating monopoly model is a valid one for understanding the pricing of medical services and that each buyer of medical services (jointly produced with hospital care) represents a unique and separable market. In the second

part of the paper, the author proceeds to apply this price discriminating model of medical care to explain certain unique characteristics of the medical profession. Organized medicine has used the ability to restrict potential price cutters from using resources complementary to the doctor's service as a means to discourage physicians from price-cutting. Their most potent weapon is the ability to cut off a physician from hospital services; other restraints include advertising restraints, selection of candidates for medical schools and internship/residency programs and "no criticism" rules. The use of such sanctions is consistent with the hypothesis that physicians operate as price-discriminating monopolists.

Kissam, P.C. "Physician's Assistant and Nurse Practitioner Laws: A Study of Health Law Reform." *Kansas Law Review* 24 (1976):1-65.

New legislation is being implemented in many states which authorizes physicians to delegate certain medical acts to categories of nonphysicians. The suggestion is made that much of this new legislation unduly restricts the potential roles of these ancillary professionals, due in part to the state legislator's desire for easily articulated and administered standards but, more important, to the political power of physicians and other groups whose economic interests are served by maintenance of strict controls. The background of such legislation is described: the nature of the expanded delegation, the hypothesized benefits, and the economic and political context within which the legislation has been established. The author concludes that much of the legislation which has been passed is unduly restrictive. Regulatory structures are established which are unduly burdensome, and most authority has been delegated to state medical licensing boards. Categories of nonphysicians permitted to perform such medical acts are generally limited to persons trained in formal education programs. Their scope of practice has been restricted in such a way as to inhibit the maximum feasible expanded delegation.

Kissam, P.C. "Health Maintenance Organizations and the Role of Antitrust Law." *Duke Law Journal* (May 1978):487-541.*

The purpose of this article is to examine the role that antitrust laws might play in protecting HMO development from unfair resistance by fee-for-service interests. The history of conflicts between HMOs and the fee-for-service sector and citations of antitrust cases are presented. Several characteristics of HMOs are described as creating the possibility that HMOs as a group will constitute a substantial threat to fee-for-service providers and insurers, including: (1) The HMO's integration of insurance and provider functions results in stronger incentives to deliver services economically. (2) HMOs may offer quality improvements (e.g., reductions in unnecessary surgery) which may be attractive to knowledgeable consumers. (3) The approach of HMOs to delivery of health care may influence public attitudes toward medical care away from "faith" and toward a pragmatic consumerism approach which would threaten the physician's traditional position in society and reduce the potential for supplier-induced demand. The author

concludes that the antitrust laws can protect HMOs from some types of unfair practices, but not all types of anticompetitive restraints. Therefore, it is suggested that "legislative change that effectively promotes HMOs and competitive policies in the health care industry remains significant" (p. 540).

*Also see Kissam and Johnson (1976).

Kissam, P.C. "Applying Antitrust Law to Medical Credentialing." *American Journal of Law and Medicine* 7 (1981):1-31.

The nature of antitrust issues raised by the private credentialing of health professionals is examined and a conceptual framework from which to analyze these issues is developed. A description is provided of the relevant provisions of the antitrust laws and their inherent conflicts with the objectives of private credentialing efforts. Case law related to professional activities is used as a basis for an antitrust analysis of medical credentialing. The author divides medical credentialing behavior into three subcategories: (1) communicative behavior designed to influence public sector behavior; (2) communicative behavior designed to influence private decisions; and (3) noncommunicative behavior that may have anticompetitive purposes and effects. A different legal analysis is provided for each category. The author theorizes that, for the most part, medical credentialing programs deserve to receive lenient antitrust treatment. However, when credentialing behavior is an essential part of a noncommunicative act to suppress competition in professional markets, neither an exemption nor a reasonableness defense should be permitted. Such behavior should be analyzed under the same criteria as it would in other industries.

Kissam, P.C. and Johnson, R.M. "State HMO Laws and the Theory of Limited Reformmongering." *Kansas Law Review* 25 (1976):21-62.

An analysis of new state legislation affecting the development of HMOs is provided in this article. A summary of the background of state HMO legislation is first discussed, including the nature of HMO performance, different legislative theories, and the relationship between federal and state legislation on the subject. The new legislative acts are then described along with some of the implementation problems faced by state agencies involved in regulating and promoting their growth. The use of state Medicaid legislation as a means of promoting HMO development is considered. Finally, the authors make some recommendations for future rulemaking regarding HMOs. The authors conclude that state HMO enabling acts appear to be well designed to prevent fraud and abuses by HMOs. However, they provide few incentives to stimulate their development or to require full coverage of ancillary services such as drug and alcoholism treatment or to improve the use of ancillary medical personnel. Medicaid programs can be used more effectively to this end. Recommendations: a requirement that HMOs provide drug services, and increase the use of ancillary personnel in part by providing an exemption from any restrictions on expanded medical delegation; they should also be encouraged to advertise about the quality of

their service; employers should be required to include an HMO option in any benefit package offered to their employees; rate regulation over such plans should be only undertaken after careful consideration is given to the competitive impacts; and finally, a statutory framework should be established to authorize prepaid contracts with HMOs to serve Medicaid recipients.

Kushman, J.E. "Denturism as a Tied Goods Problem." Paper presented at the Atlantic Economic Society, London School of Economics, August 1981, London, England.

40

The author describes the conflict over the independent practice of allied health professionals as an example of a tied goods problem. Licensing has been used to tie the purchase of routine services to the purchase of expertise necessary to detect pathology. The dental profession, as an example, has promulgated rules tying the purchase of dentures to the purchase of a dental examination, citing public health reasons for such actions. The model as formulated assumes that dentists (or other practitioners) act as monopolists in the tied goods market. They would have to do so in order to have leverage over the purchase of the tied goods. The model predicts that dentists will be indifferent about whether to incorporate denturists into their firm under a salaried arrangement or require patients to purchase a certificate of oral health before seeing a denturist. They will prefer in-house employment of denturists to a certificate, if denturists have lower production costs than dentists.

Kushman, J.E. and Scheffler, R.M. "Pricing Health Services Verification of a Monopoly Pricing Model for Dentistry." *Journal of Human Resources* 12 (Summer 1978):402-413.

A price function for dental services is derived from a monopoly model with constant marginal costs. This price function is then estimated using data from a national survey of 2,000 individual dental practitioners conducted in 1968. The results support the conclusion that dental services are priced under monopoly conditions, where marginal costs are constant and demand is linear. The same data are shown to be inconsistent with a competitive model incorporating linear supply and demand functions.

Landon, J. and Link, C. "Monopsony and Union Power in the Market for Nurses." *Southern Economic Journal* 41 (April 1975):649-659.*

The labor market for registered nurses employed in hospitals is examined to determine the impact of a monopsonistic structure on wage levels. Wage and unionization data were collected in a national survey, mailed to 65 U.S. cities. A sample of hospitals was then drawn from each city, with at least one hospital from every organizational category included. Monopsony power of the hospital is measured by the Herfindahl Index. Results indicate that the size of the hospital is significantly and negatively correlated with the beginning salaries of both bachelor's degree and

diploma nurses. However, increased nurse unionization does significantly increase wages for both types of nurses.

*Also see Landon and Link (1976).

Leffler, K. "Physician Licensure: Competition and Monopoly in American Medicine." *Journal of Law and Economics* 22 (April 1978):165-186.

The author seeks to refute the traditional notion that barriers to entry into medical practice have been used to the advantage of medical practitioners. Instead, the author contends that regulatory agencies do not exclusively serve any single economic interest. The first section of the paper presents estimates of the net present value of a physician's lifetime earnings for the period, 1947-1973. The author concludes that physicians do not receive rates of return in excess of the competitive rate. The second section presents an alternate view of licensure as either a device for information dissemination or as a constraint on consumption due to the existence of externalities. Differences in state licensing standards are found to be consistent with the hypothesis that standards are positively associated with consumers demand for quality.

Leffler, K.B. and Lindsay, C.M. "Markets for Medical Care and Medical Education: An Integrated Long-Run Structural Approach." *Journal of Human Resources* 16 (Winter 1981):20-40.

The relationship between the market for medical care and the market for medical education is investigated in this paper. Standard models of supply and demand factors are used as estimating equations, where medical school capacity is treated as an endogenous element within a complete structural system of physicians' earnings. A simple, reduced-form earnings equation is then estimated, incorporating both supply and demand factors. Such a model predicts that, if demand factors are held constant, and the stock of physicians increases, there will be a reduction in physicians' earnings. Using general practitioner earnings data assembled from periodic surveys in *Medical Economics* from 1947 to 1973, the estimated coefficients are found to be significant in the directions predicted by standard supply and demand analysis.

Lindsay, C.M. "Real Return to Medical Education." *Journal of Human Resources* 8 (Summer 1973):331-348.

A re-examination of the evidence concerning the profitability of a medical education is undertaken, with a technique employed to eliminate the upward bias of such estimates due to the level of investment required for a career. The return to investment in training is typically measured by evaluating work time with and without training. However, this technique ignores the fact that, as training increases, the productivity of work rises relative to leisure. Investment in medical training appears attractive when no attention is paid to the hours of work within each occupation. The author then adjusts the results of three studies for this bias. When such an adjustment is made, returns appear more "normal" in every period. For this reason, the author contends that existing studies have failed to support the belief that the medical profession

restrains entry into the profession by restricting medical schools admissions.

Lomansky, L.E. "The Small but Crucial Role of Health Care Vouchers." *The Hastings Center Report* 11 (August 1981):40-42.

An endorsement of health care vouchers is given in this article, together with the admission that a voucher system will not eliminate the poor's access problems to the health care system. Vouchers in combination with other incentive programs can, however, achieve the provision of health care services at a lower cost. They allow the low-income consumer to be able to make a choice among alternative plans in the same way as a middle class consumer.

Luft, H.S. "Trends in Medical Care Costs: Do HMOs Lower the Rate of Growth?" *Medical Care* 18 (January 1980):1-16.

The impact of HMOs on the growth rate in total medical care expenses per enrollee is examined. Data from several sources are examined to compare trends in utilization and costs for HMO enrollees and other groups over a period of up to 25 years. Findings reveal that the rate of growth in total costs is only slightly lower for HMO enrollees than for comparison groups. The author concludes that while HMOs offer lower costs at a point in time, they do not substantially alter the rate of inflation in these costs.

Luft, H.S. "Assessing the Evidence on HMO Performance." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):501-536.

A basic definition of an HMO is provided. The diversity of HMOs is stressed as are: (1) the limited number of studies on some performance issues; (2) the fact that the vast majority of studies focus on a few well established hospital-based prepaid group practices; and (3) that there have been no randomized controlled experiments to date. A number of dimensions of performance are examined by Luft. The evidence on costs indicates that existing prepaid practices have been able to provide medical care at costs 10 to 40 percent lower than those in conventional plans. It appears that lower costs are due to differences in utilization of services, rather than to economies of scale in group practice. The evidence on utilization of services indicates hospital care is reduced in prepaid group practice, but not clearly in IPAs. The issue of self-selection is examined, but no clear evidence on this issue is available. Similarly, only mixed and fragmentary evidence is presented on the issue of increased use of preventive services by prepaid plan enrollees. Quality of care appears to be of approximately the same level in prepaid practice as in fee-for-service. Consumer satisfaction with prepaid plans is evidenced by low rates of switching to other plans during open enrollment periods, although dissatisfaction with some aspects of prepaid group practice is expressed. The impact of HMO market shares on competing delivery systems is also examined. The evidence suggests that while there appears to be some effect, the impact on overall health expenditures has not been determined. Finally, the author reviews a

number of issues which have been inadequately addressed and recommends further research.

Luft, H.S. and Trauner, J.B. *The Operations and Performance of Health Maintenance Organizations*. Prepared under NCHSR Contract No. 233-79-3016, 1981.*

This synthesis provides an objective assessment of what is known (and not known) about HMO performance and factors which influence performance. Basic HMO models are described: (1) the staff model prepaid group practice (PGP); (2) the group model; and (3) the individual practice association (IPA). The approach used in this synthesis is a literature analysis which includes a comprehensive search of the literature, review and re-analysis of published data (rather than findings), and the use of the re-analysis to provide new or stronger evidence on the performance of HMOs. A summary of the conclusions reached by the authors is provided. The evidence most strongly supports the following conclusions:

- HMOs typically offer more comprehensive coverage for about the same premium as conventional insurance plans.
- Out-of-pocket costs are lower for PGP enrollees.
- PGPs consistently demonstrate lower rates of hospital use, attributable largely to lower admission rates.
- Economies of scale, overall, are not a factor in PGP costs.
- People with a good existing relationship with a physician are unlikely to join an HMO which excludes their physician, even if moderate cost savings are available.
- 590 PGP enrollees experience less office waiting time than do fee-for-service patients
- PGP enrollees wait longer for nonemergency appointments than do fee-for-service patients.
- PGP enrollees are much more satisfied with their financial coverage than are others.
- PGP enrollees seem consistently less satisfied about their interactions with physicians.
- Over long periods, the enrollment share of PGPs and IPAs has increased in continuing multiple choice groups.

Less conclusive evidence on a wide range of other issues is presented, along with a substantial list of questions for which no evidence is currently available.

*Also see Luft (1981).

Lynk, W.J. "Regulatory Control of the Membership of Corporate Boards of Directors: The Blue Shield Case." *Journal of Law and Economics* 24 (April 1981):159-173.

In this study, the author examines the relationship between physician influence on the boards of Blue Shield plans and maximum reimbursement levels. Tests of this relationship

use data on payment levels from a sample of Blue Shield plans under the Federal Employee Health Plan and from special surveys of plans done by the Blue Shield Association and the General Accounting Office. The results indicate that the use of either board selection or composition as a measure of physician influence results in a negative and significant association with average payment levels for covered service benefit procedures. The author concludes that regulatory intervention in the management of Blue Shield may be inappropriate if the rationale for such intervention is to reduce levels of physician reimbursement.

42

Mabee, M. *The Prudent Buyer Concept: Review and Evaluation of Its Use in the Health Care Industry.* Waltham, Massachusetts: University Health Policy Consortium, 1980.

The cost containment potential of the use of the prudent buyer concept is explored in this paper. A description is given of the attempts by the states of California and Georgia to induce competitive bidding in the hospital market. In fact, the actual plans in these states were never implemented, thus illustrating the difficulties of using a competitive bidding approach to reduce price differentials in the acute care hospital market.

Marmor, T.R. et al. "Medical Care and Procompetitive Reform." *Vanderbilt Law Review* 34 (May 1981):1003-1028.

The purpose of this article is to sort out the distinguishable reform alternatives grouped under the procompetitive rubric, and to illustrate not only the important differences among these positions, but the differences in the arguments on which they rely for support. The authors discuss three distinct classes of procompetitive proposals: (1) enhancing consumer sovereignty in medical care consumption decisions; (2) encouraging alternative organization of providers; and (3) the antitrust approach. Based on their analysis, the authors conclude that procompetition proposals are essentially efforts to preempt government cost-containment strategies. Changes that would enhance the market structure in the long run do not provide solutions to current cost problems or problems with geographic maldistribution of medical resources.

Marshall, J.M. "Moral Hazard." *American Economic Review* 66 (December 1976):880-890.

The common view of moral hazard as resulting in a deadweight loss due to the insurance subsidy ignores the social and private benefits which are derived from such risk spreading. The author conceptually analyzes the social benefits from the reallocation of resources engendered by insurance. For this discussion, moral hazard is defined as a misallocation of resources resulting when risks are only insured with normal insurance contracts. If the price of insurance is related to the probability of loss, then in the case of ordinary insurance there is overspending on loss prevention. This result directly contradicts the traditional assumption that underspending will occur in the case of ordinary insurance where risks involve small probabilities

of loss. Therefore, rather than focusing on higher coinsurance rates as the only means for reducing the moral hazard problem, the focus should be on the use of contracts which more nearly specify states of nature.

Masson, R.T. and Wu, S. "Price Discrimination for Physicians' Services." *Journal of Human Resources* 9 (Winter 1974):63-79.

A model of discrimination in the pricing of physicians' services is constructed where information and search costs are explicitly introduced into the model. A model is first developed where it is demonstrated that information costs separate physicians' markets. In this case, assuming profit maximizing behavior on the part of physicians, the medical care industry will evolve toward a price discrimination structure by income level. Therefore, rich patients are charged more than poor patients. When charity is explicitly introduced into the conceptual model, zero prices or below marginal cost prices are generated for poor patients. The authors conclude that the welfare implications of such a system of price discrimination are not clear, without examining all available alternatives.

Maurizi, A.R. "Occupational Licensing and the Public Interest." *Journal of Political Economy* 82 (March/April 1974):399-413.

Evidence is presented that licensing promotes the interests of the producer of the services being regulated rather than the consumer. The author's hypothesis is that the pass rate, proxied by the ratio of the number of licenses granted to the number of applicants, is a function of "excess demand" for the occupation (the ratio of the number of new applicants in the state to the number of licensed practitioners) and practitioner incomes. Data are derived from information on 24 licensed occupations collected by the Council of State Governments for 1940 and 1950. Data include the number of practitioners licensed in the state, the number of applicants for licensure, and the number of new licenses granted. The results indicate that a 10 percent increase in "excess demand" generates a decrease in pass rates ranging from 1 to 10 percent, depending on the occupation. Also a 10 percent increase in average practitioner incomes produces up to a 10 percent decrease in the pass rate. However, for about half the occupations considered, the model has no explanatory power.

Maurizi, A.R. *Public Policy and the Dental Care Market.* Washington, D.C.: American Enterprise Institute, 1975.

The author presents evidence to support his contention that the federal government's involvement in programs designed to increase the supply of dentists has been unnecessary and costly. In 1970, the rate of return to a dental education with the existing tuition structure is calculated to be almost 26 percent. Therefore, there is no need to provide further stimulus in order to persuade individuals to enter dental schools. Analyzing the impact of licensing regulations, the author finds high failure rates on licensing exams significantly and positively related to earnings. Dentists in states which permitted greater flexibil-

ity in the use of auxiliary personnel had higher earnings than in those states with more rigid standards. These results suggest that dentists are the greatest beneficiaries of state regulations. The author concludes that the appropriate form of government action is to end the control that state licensing laws have over the size and number of dental schools and the nature and organization of dental practice.

McClure, W. "On Broadening the Definition and Removing Regulatory Barriers to a Competitive Health Care System." *Journal of Health Politics, Policy and Law* 3 (Fall 1978):303-327.

The major point in this article is that, in order to establish effective consumer choice and provider competition, public policy measures must be activated to stimulate new types of health care plans. Specific proposed language is cited for broadening the definition of health care plans and removing the statutory and administrative obstacles to their formation.

McClure, W. "Structure and Incentive Problems in Economic Regulation of Medical Care." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):107-144.

The incentive problems, engendered by strong, direct economic controls over the health care sector by regulatory agencies, are explored. The purpose of this analysis is to demonstrate that regulatory policies should not be adopted without careful attention to the incentive structures generated by such policies. The health care market presents particular regulatory difficulties. These include the intangibility of health benefits, the monolithic nature of the health system, the existence of significant provider expertise, the lobbying abilities of professional groups, lack of consumer sophistication and, finally, the "sacred cow" nature of medical care.

McGuire, T.G. "Markets for Psychotherapy." In *Psychotherapy: Practice, Research and Policy*, edited by G. Van den Bos., Boston, Massachusetts: Sage Publishing Co., 1980.

Competition between the key care providers in the mental health field is examined by considering the extent to which psychiatrists and psychologists function as substitutes within the community mental health center (CMHC) setting. The author seeks to decompose the variance in the ratio of psychiatrist work hours to the total hours worked by psychologists and psychiatrists into the amounts attributable to differences in service provision and attributable to practitioner substitutability. The results indicate that at least 11 percent (and up to 85.8 percent) of the variance in the dependent variable can be attributed to provider substitutability.

McGuire, T.G. "Price and Membership in a Prepaid Group Medical Practice." *Medical Care* 19 (February 1981):172-183.

This article is an empirical study of price and membership in a prepaid group practice for employees of Yale University. The author attempts to estimate the effect of price on

the decision for membership by testing a model in which the probability of joining the prepaid group is estimated to be a function of the relative price of the plan, the distance of residence to the prepaid group, the perceived quality of services at the prepaid group and the demand for medical services. The most significant finding is that employees are sensitive to the price at which insurance options are available. The authors conclude that health planners and policymakers should pay close attention to all policies affecting premiums for HMOs. Broad minimum-benefit packages and "open enrollment" may threaten the HMO's ability to enroll sufficient members.

McLean, R.A. "The Structure of the Market for Physicians' Services." *Health Services Research* 15 (Fall 1980):271-280.

Tests of hypotheses regarding the structure of the demand and supply components of the physician's services market are performed in this study. A system of structural equations are used, rather than the more common reduced form "fee equation." The dependent variables are the number of visits per week demanded and supplied by general practitioners. Data are from the American Medical Association's Eighth Periodic Survey of Physicians. Information was collected on practice characteristics, patient characteristics and insurance coverage from a sample of over 5,000 office-based physicians. Results indicate downward sloping demand curves, but with relatively high elasticity (-1.75 to -2.16). The results imply a considerable degree of competition in the market for general practitioner services and are consistent with a market structure composed of small, imperfectly competitive firms.

McNeil, R., Jr. and Schlenker, R.E. "HMOs, Competition, and Government." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):195-224.

The authors examine factors affecting the development of HMOs during the 1970s including: (1) legal restrictions; (2) market conditions; and (3) federal policy. The findings suggest that legal restrictions (e.g., strict insurance regulations, open physician panel requirements) do not appear to have been a serious barrier to HMO development. Rather, the authors find that favorable market conditions (e.g., consumer income, public financing of health services) and an encouraging federal policy seem to have been responsible for the rapid expansion of HMOs. Review of legislation enacted during the mid-1970s to encourage HMO development leads the authors to conclude that the impact of provisions of these legislative initiatives (e.g., quality standards) may be to impede the operation of market forces which have, in the past, contributed to HMO expansion.

Mechanic, D. "The Organization of Medical Practice and Practice Orientation Among Physicians in Prepaid and Nonprepaid Primary Care Settings." *Medical Care* 13 (March 1975):189-204.

Information on how physicians in various practice settings organize their time and how they respond to patient demands is presented. Reported data are based on two surveys; the first was conducted between 1970 and 1971,

surveying about 900 primary care physicians (including pediatricians) in office-based practice, and the second survey was conducted between 1972 and 1973, among approximately 160 primary care practitioners who spend at least 50 percent of their time in a prepaid practice and who were remunerated on a nonfee-for-service basis. The results of the study indicate that prepaid practitioners report substantially less time per week seeing patients than their fee-for-service counterparts. The author concludes that the data support the notion that prepaid physicians respond to increased patient demands by processing patients more quickly, while those in fee-for-service practice respond to such demands by increasing their patient care hours.

44

Meilton, S.L. "Cost Containment in the Health Care Industry: An Analysis of Physician Reimbursement Under Medicare and the Implication for Future Regulation in the Health Care Field." *Dickinson Law Review* 84 (Fall 1979):51-74.

An analysis of the development and deficiencies of payment methods under Medicare provides valuable lessons to policymakers as they seek to adopt the most effective cost containment strategies for inclusion in a national health insurance proposal. Three primary methods are used to reimburse physician charges: reasonable charge, relative value guides, and lowest charge level. This comment reviews the strengths and weaknesses of each of these charge systems in terms of their effectiveness in cost control. The author concludes that the lowest charge level payment concept is the most effective reimbursement method to date.

Meyer, J.A. "Health Care Competition: Are Tax Incentives Enough?" In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

The potential pitfalls of an incentives-based proposal, such as Enthoven's, in the actual achievement of its goals, which are chiefly to contain health care costs, are discussed. The author questions three of Enthoven's assumptions: (1) There is the question of whether the regulatory requirements engendered by such a proposal, such as maintenance of a minimum benefit standard, undermine any cost savings being generated. (2) Analysis must be done to determine the extent to which apparent cost savings do not reflect real efficiencies but rather differences in service qualities. (3) There is a real question as to whether such incentives will be sufficient to induce consumers to select lower-cost plans. Further study is recommended by the author before a proposal of this type is adopted.

Mitchell, B.M. and Phelps, C.E. "National Health Insurance: Some Costs and Effects of Mandated

Employee Coverage." *Journal of Political Economy* 84 (1976):553-571.

An assessment is provided of the economic consequences of financing health insurance by requiring that employers provide insurance coverage for employees and their families. Such a "mandated" approach would extend health insurance coverage approximately 30 percent by including full-time workers not presently covered by some form of health insurance. This study simulates the effects of such a requirement on employer premiums by using a functional form estimating the increased employer payment per insurance unit. The data source is a weighted national probability sample of the 1970 U.S. population. The results indicate that a requirement to provide health insurance policies will have three effects: (1) Employer premiums will increase significantly. (2) These premium increases will decrease employment. (3) There will be a long-run reduction in tax revenues as required premium payments will eventually be reflected in lower taxable incomes.

Mitchell, B.M. and Vogel, R.J. "Health and Taxes: An Assessment of the Medical Deduction." *Southern Economic Journal* 41 (April 1975): 660-672.

The distributive rights of the medical care tax deduction are analyzed in this study. The average indirect subsidy from the health insurance premium deduction rises rapidly with income. Similarly, the medical expense deduction has substantially larger benefits for high income taxpayers. The progressive tax rate makes the medical deduction much more effective in reducing the incidence of catastrophic expenses for upper-income families than for those with low incomes. Lower income taxpayers, who incur the highest chance of larger expenses, are the least protected by current tax policy.

Monsma, G.N., Jr. "Marginal Revenue and the Demand for Physician Services." In *Empirical Studies in Health Economics*, edited by H. Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.

This paper illustrates that the traditional assumption that the marginal revenue of the supplier does not affect consumer demand does not hold in the case of physician services. The author presents tabular evidence supporting the physician-induced demand hypothesis with the effect found to be greater for surgical than for nonsurgical visits. The effect is most pronounced in certain surgical procedures which the author classifies as "useless," such as tonsillectomies and hysterectomies.

Moran, D.W. "HMOs, Competition, and the Politics of Minimum Benefits." *Milbank Memorial Fund Quarterly/Health and Society* 59 (1981):190-208.

This paper examines the assertion that a market of competing health plans offering standardized benefit packages is the optimal form of competition. Methods to achieve this result politically are discussed. The historical progress of HMOs and Congressional response suggest that it is unlikely that Congress will intentionally support development of competing prepaid plans as the primary market

condition. The author suggests that Congress tends toward an increasing benefits orientation, rather than a minimum benefits approach which would foster competition and, perhaps, favor prepaid group practice. The extensive benefits required for federal subsidies under the HMO Act put federally qualified HMOs as a competitive disadvantage. The author suggests that it is likely that the result of the push for precompetition legislation may be that the original market-based incentives will be "buried" under special interest trophies won in the competition for inclusion in the minimum benefits list.

Morrissey, M.A. et al. "Hospitals and Health Maintenance Organizations: An Analysis of the Minneapolis-St. Paul Experience." Working Paper, July 1980, American Hospital Association, Chicago, Illinois.

The effects of the Minneapolis area's seven health maintenance organizations on the local hospital community are addressed in this paper. Questions regarding the uniqueness of the Twin Cities situation, the nature of the hospital-HMO interaction, and the effect of HMO activity on community wide utilizations are the major foci. The uniqueness of the Twin Cities experience appears to lie with the disproportionate number of physicians in group practice, the presence of large employers, and the role of Paul Ellwood and InterStudy. With respect to the second question, there has been and continues to be substantial price competition among hospitals for HMO business. The authors, however, see this factor as being the result of the large number of hospital beds per capita. HMO enrollees clearly use fewer hospital inpatient services than the overall population. Given the relatively large HMO share in Minneapolis-St. Paul, these statistics should affect the overall hospital utilization rates for the metropolitan area as a whole.

Muller, C.F. and Otelsberg, J. "Interim Research Findings on Physician Reimbursement Under Medicare." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

This paper presents preliminary results of a study of carrier-wide fee levels under Medicare, using the 50th percentile fee as a measure of the fee level. Regression analysis is performed to control for the effect of local conditions on the physician services market. Results indicate that there is a positive relationship between fees and population per active physician. Family income is a significant positive factor on fee levels in four of the seven estimating equations, while ambulatory visits per bed is a significant positive factor in six of the seven equations.

Musgrave, G.L. "A Market Model of the Distribution of Dentists." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

The objective of this paper is to show that the present distribution of dentists is the result of market forces. A

review of the literature on the demand and supply for dental services and the location of dentists is given. A three equation, simultaneous model is then estimated. The first equation estimates the demand for dental services, the second equation, the supply of services, and the third equation, the regional concentration of dentists. The principal finding is that market forces do determine the supply, demand, concentration, and location of dentists.

Needleman, J. *Promoting Competition as a Regulatory Strategy*. Bethesda, Maryland: Alpha Center for Health Planning, 1980.

This report is concerned with addressing the role that the health planning system should play with respect to expanding competition in the health care system. Addressed to health planners, the report provides: (1) a discussion of the intent of new legislation and how the concepts of markets and competition can be blended in planning programs; (2) a working definition of effective competition; and (3) some implications of the new requirements for agency activities in planning, project review, and community education and advocacy.

Neuhauser, D. "The Future of Proprietaries in American Health Services." In *Regulating Health Facilities Construction*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.

The author examines the characteristics of proprietary hospitals and health maintenance organizations from several perspectives: quality of care, efficiency, accessibility, acceptability, etc. He concludes that evidence on significant generic differences between proprietary and voluntary facilities is inconclusive at best.

Newhouse, J.P. "A Model of Physician Pricing." *Southern Economic Journal* 37 (October 1970): 174-183.*

The physicians' service market is investigated in an effort to determine whether physicians' price competitively or monopolistically. The author contends that substantial consumer ignorance differentiates the health care market from other markets. This characteristic of the market leads to monopolistic pricing of physician services. The author attempts to provide a partial test of this hypothesis by assuming that if physicians price monopolistically, there should be a positive relationship between the price of services and income. The data do support this hypothesis. A series of other tests are performed which attempt to control for factors such as the higher fees that a specialist may charge and quality of care. Income per capita is significantly associated with fees in all cases, providing further support for the monopoly pricing hypothesis. Physician price elasticities with respect to income in 1961 are calculated to range from .7 to .9, depending on the type of service performed. The price elasticity of tooth filling is significantly higher at 1.6, using the same model. Tests of the physician profit maximizing hypothesis do not support the hypothesis. The author suggests the results support the thesis that physicians do not fully maximize profits but,

rather, raise prices when rising incomes generate increased demands.

*Also see Frech and Ginsburg (1972); Newhouse and Sloan (1972); Newhouse and Phelps (1976).

46

Newhouse, J.P. "The Erosion of the Medical Marketplace." In *Advances for Health Economics and Health Services Research*, edited by R. Scheffler. Greenwich, Connecticut: JAI Press, 1981.* Three different models of the medical care market are described. The standard competitive model, the competitive model modified to include technological change, and the competitive model modified to include consumer search behavior. Empirical tests of these alternative models are conducted using data collected on price changes for four medical services: physician, hospital, dental and drug services. The testing results support the null hypotheses suggested by the "modified competitive model," strengthening the author's contention that high levels of insurance in the medical care market permit prices and expenditures to increase at above average rates independent of changes in demand. Therefore, the rate of technological change is higher and price competition is less than would have been observed in the absence of such insurance.

*Also see Newhouse (1978); Newhouse (1979).

Newhouse, J. and Taylor, V. "How Shall We Pay for Hospital Care?" *The Public Interest* 23 (Spring 1971):78-92.

In this paper the authors propose a plan for experience rating hospitals called Variable Cost Insurance (VCI). In the simplest VCI scheme, which is solely for hospitals, hospitals in a community are rated according to their expensiveness. Individuals, in conjunction with their physicians, would choose a single hospital and both their premiums and level of reimbursement would be proportional to the expense rating of the hospital they chose. Consumers would be free to use hospitals other than the one on which their insurance is based. However, should they choose to use one which is more expensive, they would only be reimbursed for the absolute amount of the bill which their insurance would have covered had they used the institution on which their policy is based. Should they elect to use a less expensive hospital, they would receive some form of rebate. The authors argue that such a program would lay a basis for limited price competition among hospitals and that the experience rating concept could be extended to physicians. A major difficulty, however, in implementing such a program is the development of an index that accurately reflects the relative expensiveness of the providers and is not influenced by the case mix treated.

Newhouse, J.P. et al. "How Sophisticated are Consumers About the Medical Care Delivery System?" *Medical Care* 19 (March 1981):316-328.

The objective of the study is to obtain information about consumers' knowledge of the health care delivery system. Consumer responses to a series of questions about the health care system are analyzed. The appropriateness of constructing a multi-item scale which summarizes consumer sophistication is then discussed. Data are gathered from a self-administered survey based on 4,967 people between the ages of 14 and 66, sampled from four geographic regions in Ohio, Massachusetts, South Carolina and Washington. The results indicate that patients are more sophisticated about what a physician might tell them about a particular problem than they are about their initial choice of a physician. The authors suggest that consumer education efforts be directed at familiarizing consumers with notions of certification, staff privileges, and other pertinent information for choosing a regular source of care.

Noll, R.G. "The Consequences of Public Utility Regulation of Hospitals." In *Controls on Health Care*. Washington, D.C.: National Academy of Sciences, 1975.

The possible effects of proposed policies to subject the hospital industry to "public utility" regulation are explored. Existing theoretical models of regulation are examined, including the objectives of regulation, the forms of regulation and the rationale for these regulations. Then this theoretical framework is used to project the likely consequences of introducing a theoretical framework into the hospital sector. The three major results from such regulation are expected to be resistance by regulators to innovation, substantial consumer cross-subsidization and protection of producers in the price structure, and an increase in prices to monopolistic levels. The overall conclusion is that the hospital industry is already insulated from market incentives. The use of public utility regulation will simply exacerbate this insulation.

Paul, C.W. II "Competition in the Medical Profession: An Application of the Economic Theory of Regulation." *Southern Economic Journal* 48 (January 1982):559-569.

This study attempts to test the effect of restrictive practices of the medical profession on the level of physicians' earnings. The author formulates a model of political decision-making in the context of price-entry regulation where the regulators are treated as members of the benefiting group. To test this model, the author examines the effect of the method of state licensing board selection on the incomes of physicians. The hypothesis is that physicians' incomes will be higher in those states where the licensing board is controlled by the profession, and lower in those states where the licensing board is selected by the governor. The results of the analysis provide support for the hypothesis. In 1976, physicians' incomes were on the average \$2,800 higher in states where the licensing board was directly controlled by the profession.

Pauly, M.V. "The Economics of Moral Hazard." *American Economic Review* 58 (June 1968):531-537.

The author argues that, if all individuals are risk-averse and if the demand for medical care is not perfectly inelastic, then insurance for certain kinds of illnesses may be nonoptimal. In this case, if consumers are forced to purchase insurance, inefficiencies develop through the creation of a "prisoners' dilemma" situation. Although increased use of care raises premiums, no one individual will have an incentive to restrain use of the system, since the perceived benefits are so much greater than the costs, which are spread over all policy-holders. The analysis, therefore, points out that "moral hazard" in the insurance area is the result of rational economic behavior. No single insurance policy then is "best" for society; instead, the extent of insurable expenses depends on the tastes of those being insured.

Pauly, M.V. "Efficiency, Incentives and Reimbursement for Health Care." *Inquiry* 7 (March 1970):114-131.

Present incentives affecting each of the three major components of the medical care system—the hospital, the physician and the consumer—are described in terms of their effects on efficiency. Any service provider's income depends on receipts per unit of output and the number of output units produced. Assuming physicians and hospitals are net income maximizers, the author poses the following catalogue of provider incentives under various reimbursement plans:

1. If neither price nor output is fixed, the vendor will have an incentive to increase both factors.
2. If price is fixed and output is not, the incentive will be to control the cost per unit but increase output.
3. If both price and output are fixed, there will be incentives to reduce costs and output.

A similar catalogue of incentives exists for consumers, assuming the total price they pay is determined by the per unit price and the number of units purchased: (1) If price and quantity vary, thus varying total price paid, then the consumer has an incentive to search for the lowest price and hold down output purchased. (2) If price varies but output does not, then an incentive exists to seek the lowest price but output will increase above that consumed under (1). (3) If total price is constant, then the consumer will maximize quality and quantity, ignoring price.

Pauly, M.V. "The Welfare Economics of Community Rating." *Journal of Risk and Insurance* 31 (September 1970):407-418.

In this paper, the author describes the efficiency and equity impacts of a community rating system within the health care sector. A conceptual model of the expected utility of an insurance purchaser is developed under varying provisions where the problem of moral hazard is assumed not to exist. Under a community rating system, low-risk individuals are found to purchase less than the efficient amount of insurance, while high-risk individuals purchase too much

insurance. This implies that a community rating system leads to a redistribution of income and the redistribution takes place in an inefficient manner. The philosophy of community-rated health plans is that hospitalization insurance should be a way of spreading the costs of hospitalization across community members.

Pauly, M.V. "The Behavior of Nonprofit Hospital Monopolies: Alternative Models of the Hospital." In *Regulating the Construction of Health Care Facilities*, edited by C.C. Havinghurst. Washington, D.C.: American Enterprise Institute, 1974.

What might be expected to happen should control over the process of granting certificate-of-need be entirely captured by the hospital industry is discussed. The author's contention is that the nonprofit monopoly is as dangerous, albeit for different reasons, as the for-profit monopoly. The author tests several economic models against known economic behavior of hospitals in order to ascertain which model fits best. He concludes that the true model of the hospital lies somewhere between the alternatives of perfect cooperation and noncooperation. To the extent that cooperation on prices, outputs, and staffing can be achieved, monopoly is to be feared. To the extent that there is competition among physicians, even on the staff of a monopoly hospital, monopoly may not be so much different from competition. The author prefers a model which incorporates physician behavior, more specifically the not perfectly cooperative form in which monopolization has effects rough!, similar to those of an orthodox economic model. Such a model suggests that an appropriate policy might involve limitations on expansion but not on numbers of hospitals. In addition, the author contends that such a model suggests that regulators need to look at the use physicians make of hospitals.

Pauly, M.V. "The Ethics and Economics of Kickbacks and Fee Splitting." *Bell Journal of Economics* 10 (Spring 1979):344-352.

Reasons are offered why some physicians have favored bans on fee splitting. Fee splitting or kickbacks occur when price diverges from marginal cost. If realignment of prices to equal marginal costs is impossible, then fee splitting or kickbacks are a vehicle for bringing the net price of the services of a specialist, as perceived by the general practitioner, closer to the true marginal cost of the service. With kickbacks or fee splitting, the general practitioner will not perform the service herself/himself, rather the service will be performed by specialists. If such practices are prohibited, the services will still be performed but will be done by the general practitioner. Practitioners can get around the legal or ethical prohibitions against such behavior by integrating their services.

Pauly, M.V. *Doctors and Their Workshops*. Chicago, Illinois: University of Chicago Press, 1980.

The purpose of this study is threefold: (1) to examine how physicians as providers of inputs affect the productivity of other providers in the health sector; (2) to examine the role of the physician as a surrogate demander for the patient in

choosing the level of inputs to produce health; and (3) to examine the effect of the information physicians provide on demand for physicians' and other medical services. With respect to the first issue, the author presents the results of an empirical estimation of a hospital production function that contains a measure of physician inputs. The results of the analysis indicate that hospitals tend to overuse hospital inputs relative to physician inputs. In other words, a given stock of physicians could be used more efficiently if physicians spent more time at the hospital and hospitals eliminated some personnel and nonlabor inputs. With respect to the second issue, the author attempts to show, at the conceptual level, that physicians as proxy demanders still have an incentive to choose the cost minimizing combination of those outputs for which he does not pay directly. The physician may not act as his patients' agent in choosing a level of health or well-being, but he will act as such an agent in choosing the level of other inputs for a given level of health. With respect to the third issue, the author finds that physicians can affect consumer demand by what they tell consumers. The effect is strongest for the poorly educated in large, physician-dense cities. However, the overall effect is small. The author concludes that the ability and willingness of physicians to generate demand for their services is far more limited than is commonly supposed.

Pauly, M.V. "Overinsurance: The Conceptual Issues." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.*

The extent and form of medical insurance is said to be the primary cause of inflation in medical care and it is suggested that, with the exception of some of the poor and near-poor, most people have too much insurance of the wrong kind. Risk aversion, moral hazard, and welfare losses are discussed. The author concludes that overinsurance can occur and is a consequence of distortions in relative prices facing nonpoor purchasers of insurance. Elimination of these distortions may be sufficient to restore balance in the market. Government neutrality toward the health care system may be the better course, allowing individuals to make choices.

*See also Pauly (1974).

Pauly, M.V. "The Effect of Medical Staff Characteristics on Hospital Costs." In *Physicians and Financial Incentives*, edited by J.R. Gabel *et al.* Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

Data on the characteristics of a hospital's medical staff and on costs are analyzed to investigate the premise that physician characteristics can have a significant impact on a hospital's costs. The incurred cost of patient treatment in a hospital is assumed to be a function of the patient's characteristics, the characteristics of the physicians treating the patient, and the general attributes of the hospital and medical staff. The data were assembled by combining patient discharge abstracts from California Health Data Corporation's system with cost data from the Hospital

Administrative Services Program of the American Hospital Association. Hospital costs are found to be significantly related to input prices, the volume of inpatient hospital admissions, to case mix, and to the concentration of output among the medical staff. Hospital costs are higher, the less concentrated is the output among physicians. Alternatively, dispersing a given number of the patients among more physicians raises costs.

Pauly, M.V. "Hospital Characteristics, Physician Productivity, and Fee Levels." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

An examination of the impacts of alternative in-hospital input levels on physicians' output and price behavior is presented in this study. The level of hospital inputs and costs is taken as given. A conceptual model of physician practice is presented, from which two hypotheses are derived. First, hospital inputs and characteristics will be related to physician productivity. Second, these same variables will affect physician pricing, most likely in a negative direction. Data used to test these hypotheses empirically are combined from three sources: (1) the 1976 Physician Practice Costs Survey; (2) AHA hospital data; and (3) the HCFA data on the number of physicians with hospital staff appointments. Results indicate that the most important characteristic associated with higher physician productivity is the number of hospital employees per active physician. Hospital size, scope, or control of facility are not significantly associated with the hospital input variable in the model. The author interprets this result as indicating that rapid increases in physician supply will be associated with increased competition for hospital staff appointments and, perhaps, declining productivity.

Pauly, M.V. and Redisch, M. "The Not-for-Profit Hospital as a Physician's Cooperative." *American Economic Review* 63 (March 1973):87-99.

Arguing that the physician staff of a hospital effectively controls its decisionmaking processes, the authors develop a model of the operation of a not-for-profit hospital in which the net income per physician member is maximized. This assumption dictates the production function under which the hospital operates. Patient demand is for the combined services of the physician and hospital. The model provides an explanation for certain peculiar characteristics of the not-for-profit hospital, such as extreme quality consciousness and duplication of facilities. In addition, the model explains the consistent finding that such hospitals operate below cost-minimizing levels. There is no empirical test of the model due to lack of appropriate data.

Pauly, M.V. and Satterthwaite, M.A. "The Effect of Provider Supply on Price." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

In this paper, the authors develop an alternative theory to the target income model to explain the positive relationship between medical price levels and the number of providers in an area. This alternative is termed the "increasing monopoly" theory where firm-level demand curves become more inelastic as the number of providers increases. Consequently, income maximizing prices may well increase. The reason for this increased inelasticity is due to the decrease in information flows which results from the increased numbers of providers. Data used to test this theory are from a telephone survey of physicians' offices in 100 large SMSAs. Comparative tests of the target income and increasing monopoly theories are constructed. Under the increasing monopoly theory, price is a function of the number of physicians in a market area; variables proxying for community information flows are related to this price variable. Results are consistent with the predictions of the increasing monopoly model and inconsistent with the target income model.

Pollard, M.R. "Fostering Competition in Health Care." In *Regulating Health Care: The Struggle for Control*, edited by A. Levin. Montpelier, Vermont: Capital City Press, 1980.

The author contends that the basic issue involved in the debate between advocates of regulation and competition in the health care sector is one of determining responsibility for assuring that resources are used appropriately. There are four essential elements involved in the use of a competitive strategy in the health care area. These are the development of new methods of financing and delivery of care, the construction of alternative delivery systems, the removal of existing restraints on consumers' access to information, and the encouragement of buyers to demand better value for their health care dollar. There are many unanswered questions as to how effective such a strategy can be in promoting greater efficiency and containing costs. Implementation of such a competitive strategy requires the elimination of legal, economic, and ethical barriers to the organization of new financing mechanisms, new alternative delivery systems, and low cost providers.

Pollard, M.R. and Leibenluft, R.F. *Antitrust and the Health Professions: Policy Planning Issues Paper*. Washington, D.C.: Federal Trade Commission, 1981.

The focus of this paper is on the types of regulatory actions undertaken by health professional organizations and a consideration of how antitrust analysis should be applied to assess the impact of such actions on competition. The author contends that in a period of regulatory reform, it is essential that antitrust policy be used to insure that "fair and open" competition prevails (p.106). Antitrust analysis is sufficiently flexible to take into consideration the special characteristics of the health care industry. The legality of self-regulatory activities should be based on a test of "reasonableness." Guidelines to assess "reasonableness" include factors such as limitation of consumer choice, exclusionary nature of activities, the existence of less restrictive alternatives, the reasonableness and objectivity

of the standards, and the procedural fairness of the program.

Posner, R.A. "Certificates of Need for Health Care Facilities: A Dissenting View." In *Regulating Health Facilities Construction*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.

It is often suggested that certificate-of-need laws are borrowed from public utility regulation and further, that they are part of a broader movement to classify institutional providers of health care as public utilities. The author argues that the general proposal to treat health care providers as public utilities is unsound because it ignores both the failure of public utility regulation in its traditional settings and the differences between those settings and the health care field that make such regulation even less likely to succeed in the latter setting. This paper deals specifically with the appropriateness of importing one feature of public utility regulation—control over capital investment and new construction—into the health care field. The author argues that regulation introduces various distortions into the incentive structure of firms (hospitals) that weaken the presumption they will act to minimize their costs. Among the anticompetitive consequences of construction control cited by the author are: internal subsidization, cartelization, and barring new entry into the industry.

Praiss, I.L. et al. "Changing Patterns and Implications for Cost and Quality of Dental Care." *Inquiry* 16 (Summer 1979):131-140.

The patterns of growth in dental health insurance and the mechanisms by which carriers seek to contain costs are examined. The methodology employed is a survey of third-party payers, including 230 programs. The authors' findings are that two-thirds of the growth in dental coverage has been among commercial payers who emphasize cost-sharing mechanisms rather than pre- or posttreatment review procedures.

Ramsey, J.B. "An Analysis of Competing Hypotheses of the Demand for and Supply of Physician Services." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27, 1980. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

This paper has three objectives: (1) to provide a theoretical framework within which to analyze the competing hypotheses of physician pricing and to develop feasible hypothesis testing procedures; (2) to develop specification error tests to be able to evaluate inferences drawn from these tests; and (3) to determine the applicability of standard theory to the observed data. The author concludes that none of the currently formulated theories, such as the "target income" or "supply-induced demand" theory, explain the anomalous empirical relationships which appear in the literature on this subject. The reasons why such anomalous results have been found in physician pricing studies may be

measurement difficulties. These difficulties include such problems as the need to disaggregate physicians by location and specialty, and to recognize explicitly the restricted geographic size of the physician market.

Redisch, M. "Physician Involvement in Hospital Decisionmaking." In *Physicians and Financial Incentives*, edited by J.R. Gabel *et al.* Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

50 The contention in this article is that health care in the hospital setting should be viewed as a single product produced by the combined actions of hospitals and physicians. For this reason, the roles that the physician plays in hospital strategies aimed at cost control are important. Three forces which reinforce the physician's incentive to use hospital services inefficiently are the separation of physician and hospital bills for jointly produced health care, the proration of basic hospital service costs across all patients and the pervasiveness of hospital insurance. It is difficult for an administrator to directly confront the medical staff on cost issues, so a more effective control mechanism would be to impact the physician directly. One way would be to make structural changes in the way physicians are educated and reimbursed. There needs to be emphasis put on the physician as a manager of health resources. Movement should be away from a fee-for-service system where physicians control hospital inputs without bearing the responsibility for them.

Redisch, M. et al. "Physician Pricing, Costs and Income." In *Advances in Health Economics and Health Services Research*, edited by R. Scheffler. Greenwich, Connecticut: JAI Press, 1981.

A heuristic model of physician pricing and income determination is developed, based on the concept that physicians are utility maximizers and also periodically induce added utilization. The authors use a reduced form estimating equation to test the empirical validity of their model. Data are obtained from a 1975 national survey of about 1,000 office-based physicians. The results indicate that increased physician-to-population ratios are associated with decreased numbers of patient visits and increased nonphysician costs. At the same time, gross and net incomes do not fall. These results lead the authors to conclude that increasing physician supply, given current institutional arrangements, will exacerbate the already existing inflationary problems of the health care sector by leading to increased service prices and reduced output.

Relman, A.S. "The New Medical-Industrial Complex." *New England Journal of Medicine* 303 (October 1980):963-970.

The rise of a large growing network of private, for-profit corporations supplying health care services is described in this article. These health services include hospital care, nursing home care, home care, laboratory, and hemodialysis. Some issues which develop due to the growth of such institutions include the fact that health care is different from other products, the existence of extensive third party

coverage, the dependence of the consumer on the advice and judgment of the physician. For these reasons, private enterprise in the health area must be carefully regulated. The key to the problem of overuse of medical services lies with the medical profession. Physicians should have no pecuniary association with the medical-industrial complex. Dangers from commercial facilities include "cream skimming," the tendency to emphasize technology over the personal needs of the patient, and its ability to hinder the national health insurance debate.

Richardson, W.C. "Comparisons of Prepaid Health Care Plans in a Competitive Market: The Seattle Prepaid Health Care Project." DHEW Publication No. (PHS) 80-3199. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

This paper reports on a four year (1971-75) comparative study of a prepaid independent practice using fee-for-service reimbursement and a prepaid group practice, both of which were located in Seattle, Washington. The study examined differences in ambulatory care and hospital utilization, costs of services, quality of care, access, and patient satisfaction between the two plans. It was found that, in general, the prepaid group practice appeared to be more efficient and less costly, whereas patient satisfaction was greater for patients in the fee-for-service setting. Average per-enrollee cost was 33 percent higher for the fee-for-service patient group, with much of this difference due to the higher rate of hospital admissions and higher costs per admission for the fee-for-service group.

Roemer, M.I. et al. *Health Insurance Effects: Services, Expenditures and Attitudes Under Three Types of Plans*. Bureau of Public Health Economics, Research Series No. 16. Ann Arbor, Michigan: University of Michigan, 1973.

This is a preliminary report of an investigation into the effects of varying types of health insurance organizations on a selected sample of subscribers in southern California. The effects of three types of plans are examined, including commercial plans, provider-sponsored plans, and group practice plans. Effects being measured are health care utilization rates, range of services provided, out-of-pocket costs, and attitudes. Commercial plans enroll individuals with lowest risks of sickness, while group practice plans enroll those with highest risk. Hospital admission rates are highest among provider-sponsored plans, much lower among group practice plans, while commercial plans have the lowest rates. Group practice plans have, by far, the shortest length of hospital stay. As a result, the aggregate measure of days of hospital care per 1,000 persons per year is also far lower for these plans. Ambulatory service use is highest in provider-sponsored plans and lowest in commercial plans. Out-of-pocket expense is significantly lower in group practice plans than in the other two plans, while the premium for group practice plans is highest.

Roemer, R. "Licensing and Regulation of Medical and Medical-Related Practitioners in Health Service

Teams." *Medical Care* 9 (January/February 1971):42-54.

The author discusses methods that might be employed to make licensure laws more responsive to current and emerging patterns of delivering health care services. First, current regulatory mechanisms in the medical work force area are discussed. Second, an attempt is made to catalog modifications in state licensing laws that have been implemented in response to changing work force needs. Finally, a new licensing model is suggested where teams of health professionals working in organized groups would be licensed rather than individuals, as is presently done.

Rosenblatt, R.E. "Health Care Reform and Administrative Law: A Structural Approach." *Yale Law Journal* 88 (December 1978):243-336.

The author analyzes the legal structure of government passivity in the area of health care reform as it has passed through three stages: (1) congressional ambivalence toward the issues as reflected in highly symbolic legislative responses; (2) executive inaction and abdication of enforcement duties created by Congress; and (3) judicial quandaries with respect to consumer litigation against administrative inaction. A major conclusion of the paper is that courts should contribute to the restructuring of agency decision-making to provide for a more participatory process and more justifiable outcomes.

Rossiter, L.F. "Who Initiates Visits to a Physician?" In *Data Preview 3*. DHHS Publication No. (PHS) 81-3291. Washington, D.C.: Department of Health and Human Services, 1980.

This preliminary report presents the relative frequencies of physician and patient initiated visits, and then decomposes these frequencies by the characteristics of the visits and the patients. The percentage of physician initiated visits was higher for outpatient department visits than for visits to physicians' offices. Visits of older people and for prenatal or postnatal care are more likely to be initiated by the physician. Data are based on interviews with the patient, or other persons in the patient's household, concerning physicians' visits within the first quarter of 1977, as part of the National Medical Care Expenditure Survey.

Rossiter, L.F. and Taylor, A.K. "The Effects of Unionism on the Provision of Health Insurance Benefit." In *Industrial Relations* (forthcoming).

Using data from a national survey of employers, the authors of this paper study the question of whether union activities have contributed to the presence of health insurance and whether the growth of unions is associated with higher insurance benefits and costs. First, the literature connecting trade unions and fringe benefits is discussed. Regression equations are then used to analyze the net association between employment-related health insurance and the presence of trade associations. Data are taken from the Employer Health Insurance Cost Survey (part of the National Medical Care Expenditure Survey). Four equations are estimated, describing four separate aspects of

employment-related health insurance: (1) whether a firm provides health insurance; (2) mean annual premiums; (3) mean employer contributions; and (4) the percent of premiums paid by the employer. The results indicate that employees in firms with a trade union are as likely as firms without a trade union to have an employment-related health insurance plan, but employees in unionized firms receive a higher level of benefits, holding other things constant.

Ruffin, R.H. and Leigh, D.E. "Charity, Competition, and the Pricing of Doctors' Services." *Journal of Human Resources* 8 (Spring 1973): 212-222.

Another explanation for price discrimination in medicine is developed in this article. In contrast to the view that the American Medical Association is the agent to enforce collusive behavior on the part of physicians, the authors construct a charity-competition model in which price discrimination is the result of utility maximization on the part of the physician. According to this theory, in market equilibrium there will be different prices for different buyers for an identical product or service. A conceptual rendering of the model is then produced, where physicians' services are homogeneous, allowing the market demand curve to be perfectly inelastic while the individual physician's demand curve is perfectly elastic. Finally four implications of such a model are considered with regard to the pricing of physician services. First, the existence of price discrimination is independent of the degree to which the profession is formally organized. Second, price discrimination should be observed in both hospital care and office care pricing structures. Third, a decrease in differentials between the prices of charitable and customary services should be observed on both the demand and supply sides of the charity market. Fourth, the doctor shortage, if it exists, is a consequence of the medical ethic embedded in the utility function of the charitable model.

Rushefsky, M.E. "A Critique of Market Reform in Health Care: The Consumer Choice Health Plan." *Journal of Health Politics, Policy and Law* 5 (Winter 1981):720-741.

The components of Enthoven's Consumer Choice Health Plan are described and then criticized for its underlying assumptions about implementation feasibility and ability to control costs. The author argues that the plan is targeted, incorrectly, at changing consumer incentives rather than those of insurers and providers. If there are problems with current insurance plans, the problems lie in reimbursement policies followed by government and the private sector, and these could be changed within the contexts of present programs.

Russell, L.B. *Technology In Hospitals*. Washington, D.C.: Brookings-Institution, 1979.

The author examines the recent history of technological diffusion in hospitals and considers some of the new technologies in detail. The purpose of the examination is to ascertain whether technological changes have contributed disproportionately to the rapidly rising costs of medical

care. The author utilizes both case study and statistical methodologies. Several technologies are considered from both points of view. The case study of each technology looks at its purpose and use, its history, the kinds and amounts of resources it employs and their cost, and its benefits for patients. The statistical analysis investigates the distribution of the technology among hospitals, or when the data permit, the speed with which it was adopted, and tries to explain what factors account for that distribution and that speed. The author's overall conclusion is that technological changes are not the true cause of rising costs. The problem lies in the philosophy that no one should have to think about cost when life and health are involved. The growth of private insurance and the introduction of Medicare and Medicaid are the practical manifestations of that philosophy. In the author's view, stemming the rise in costs does not await new methods of budgeting and reimbursement, but rather requires that costs be considered even when health is at stake. Various general approaches are explored for dealing, directly or indirectly, with policy decisions about the availability of and access to health care resources in general and high technology resources in particular.

Salkever, D.S. and Bice, T.W. "The Impact of Certificate-of-Need Controls on Hospital Investment." *Milbank Memorial Fund Quarterly/Health and Society* 54 (Spring 1976):185-214.

After detailing some of the historical background for certificate-of-need (CON) controls and reviewing several of the critical arguments in the literature regarding the effects of certificate-of-need, the authors attempt to quantify the effects of CON regulations on hospital investment. In this approach, the effects of CON are estimated by statistically controlling for factors other than CON which influence investment. Statistical models are specified to include most factors other research has shown to affect investment in order to minimize the possibility of spurious interpretations about CON's effects, when relevant non-CON factors are eliminated from the analysis. Estimates of the investment impact are derived from cross-section, multiple regression analyses of investment by non-federal short-term general and other special hospitals in the 48 contiguous states and the District of Columbia. Estimates of CON impacts were obtained from three measures of investment: (1) change in plant assets; (2) change in bed supply; and (3) change in assets per bed. All three measures were defined over the 1968-1972 period. The results show that CON did not reduce the total dollar volume of investment but altered its composition, retarding expansion in bed supplies but increasing investment in new services and equipment, particularly those which constitute innovations in medical practice. The authors suggest that this finding is due to: (1) the emphasis in CON laws and programs on controlling bed supplies; and (2) a substitution of new services and equipment for additional beds in response to financial factors and organizational pressures for expansion.

Sapolsky, H.M. et al. *Corporate Attitudes Toward Health Care Costs*. Final Report, NCHSR Grant No. 1R03 HS 03447-0151. December 1980.

This study attempts to describe the attitudes and actions of major corporations toward their own health care costs. The authors interviewed senior level officials and benefit managers in 69 major firms, as well as insurance executives, government officials, provider association representatives, brokers and union officials. The firms reported that the health benefit is extremely popular among their workers and, as a result, all firms were reluctant to appear to be jeopardizing the benefit in any way. Nearly all reported to be unwilling to alter benefits or improve claims control techniques. Most were cautious about promoting HMOs and there was little inclination to become directly involved in local health planning activities. Most of the major corporations were found to be neither greatly concerned nor strongly motivated to do much about their health benefit costs. Employee health benefits are reported to account for two or three percent of corporate expenditures and are growing less rapidly than many other business costs.

Scheffler, R.M. "The Pricing Behavior of Medical Groups." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):225-240.

The author develops an empirical model of the pricing structure of group practices. Assumptions are that physicians are price setters and fees are set in such a way to maintain excess demand in the system. Additionally, the impact of other characteristics of group practice on fees charged is investigated. Data are available from responses by 61 medical groups to a mail survey conducted in North Carolina in 1972. Data also were collected on the customary price for three different common medical services. The results indicate that groups that utilize nonphysician managers have lower fees, that in groups where physicians are paid using a non-salaried system (e.g., income sharing), prices for selected procedures are lower, and that the size of the group does not have a statistically significant relationship to fee variations. The author indicates that caution is necessary in the clamor for increased public funding for group practice. There is a potential that such funding, without certain safeguards, could increase medical care costs.

Schoen, M.H. "Alternative Oral Health Service Delivery Systems." *Family and Community Health* 3 (November 1980):71-80.

A description of both the traditional dental practice and alternative types of practice is presented in this article. The literature, although sparse, which compares the traditional practice with a prepaid practice, indicates much higher use rates among those choosing the prepaid plan. The author, on the basis of personal observations, believes that capitation plans offer better benefits for the same monthly payment as do fee-for-service plans. However, there has been no way to hold constant the oral health status of the two populations.

Schroeder, S.A. and Showstack, J.A. "Financial Incentives to Perform Medical Procedures and Laboratory Tests: Illustrative Models of Office Practice." *Medical Care* 16 (April 1978):289-298.

The purpose of this paper is to demonstrate that existing fees and pricing systems create incentives to use technology-intensive medical care even within primary care services. They exemplify this finding by examining the specialty field of general internal medicine. The presence of these incentives is made explicit by projecting net incomes for four hypothetical internists whose practices vary only in the extent to which they employ certain medical and lab tests. The study concludes that current reimbursement mechanisms preferentially reward specialty care.

Scitovsky, A.A. and McCall, N. "Use of Hospital Services Under Two Prepaid Plans." *Medical Care* 18 (January 1980):30-41.

Comparison of utilization of hospital services by members of two prepaid health plans offered to Stanford University employees is presented. The Kaiser Foundation Health Plan and the Palo Alto Medical Clinic Plan, a multi-specialty fee-for-service group practice are found to have essentially equivalent hospital days per 1,000 enrollees. Surgical rates are also similar, although much more surgery is performed on an outpatient basis by Kaiser Plan physicians. The authors attribute these findings (of low hospital use and of surgery performed under the fee-for-service plan) to two possible considerations: (1) a large group practice will only add another physician if demand exists for services, reducing the incentive which exists in solo practice for demand generation; and (2) peer presence in group practice acts to restrain members from over prescribing. In addition, the surgical case-mix of the two plans was sufficiently different as to lead the authors to speculate that self-selection is present and that the different benefits offered by the plans appeal to individuals with different "tastes" for medical care.

Scitovsky, A.A. et al. "Factors Affecting the Choice Between Two Prepaid Plans." *Medical Care* 16 (August 1978):660-681.

An examination of the factors affecting the choice between two comprehensive prepaid plans is discussed in this article. Two plans available to Stanford University employees and their families are discussed: (1) a Blue Cross plan (which was a predominantly fee-for-service group practice); and (2) a prepaid group practice plan. A population of about 1,800 families was studied over a one year period between 1973 and 1974, where approximately 50 percent used one plan and 50 percent used the other. The two major factors affecting the choice of plan were income and distance from the provider group. As income decreased, the preference for the prepaid plan increased. As distance from the Blue Cross plan increased and distance from the Kaiser facility decreased, the preference for the Kaiser plan increased. Provider proximity was a more important consideration for those using the Blue Cross clinic plan than for those subscribing to the Kaiser plan.

Seidman, L.S. "Medical Loans and Major-Risk National Health Insurance." *Health Services Research* 12 (Summer 1977):123-128.

The crucial need for medical loans to be available for households unable to pay medical bills is discussed in this article. It is argued that such loans are an essential component of catastrophic national health insurance. The cost-consciousness strategy fails if households buy supplemental private health insurance for routine health expenses. Three policies are needed to prevent use of such a vehicle: (1) Current tax subsidies favoring such coverage must be eliminated. (2) If supplemental insurance is offered by an employee, she/he must also offer an equivalent amount in cash. (3) Adequate medical loans must be assured. Principles guiding the implementation of this third policy include adequacy, economy, simplicity, continuity and integrity.

Seidman, L.S. "Consumer Choice Health Plan and the Patient Cost-Sharing Strategy: Can they be Reconciled?" In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

The apparent conflict between proposals which advocate competition among HMOs and those which suggest increased patient cost sharing under fee-for-service is explored. The author suggests that HMO proponents overstate the merits of prepayment and that a positive contribution can be made by patient cost-sharing. He suggests that amending Enthoven's Consumer Choice Health Plan to provide no tax credits for insurance to "high income" households (e.g., \$60,000) would result in a market approach which could be supported by proponents of both types. In addition, maximum out-of-pocket payments should be developed based on family income levels, with government-guaranteed loans available, and an income-related catastrophic program for the uninsured is proposed.

Seidman, L.S. "Income-Related Consumer Cost Sharing: A Strategy for the Health Sector." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

An income-related consumer cost sharing strategy is proposed and contrasted with two alternative strategies: (1) the laissez-faire strategy; and (2) the regulatory strategy. The consumer cost-sharing strategy has three main elements: (1) a tax incentive to induce significant patient cost-sharing under private health insurance policies; (2) a medical tax credit; and (3) a guaranteed medical loan program. The credit and loan programs would provide insurance for those families which are unable to pay for private insurance.

Shaffert, T. et al. "Study of Reimbursement and Practice Arrangements of Provider-Based Physicians." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of

Health and Human Services, Health Care Financing Administration, 1980.

54

The objective of this study is to analyze financial and other data relating to hospital-based physicians (HBPs). In particular, the authors are interested in knowing whether earnings and contractual arrangements vary according to the hospital characteristics of the area in which they are located. The hospital characteristics of interest include teaching hospital status, number of hospital beds, urban/rural location, and the extent of third-party reimbursement. The data include 120 hospitals and about 2,600 hospital-based physicians for the fiscal year ending in 1975. Concentration is on five physician specialties: (1) radiology; (2) pathology; (3) anesthesiology; (4) cardiology; and (5) emergency. Both univariate and multivariate analysis support the finding that salary arrangements are associated with lower average earnings, while percentage arrangements are associated with higher average earnings. Because salaried HBPs are more prevalent in teaching hospitals, their average earnings are lower than in nonteaching facilities. HBPs in smaller hospitals tend to earn more than those in medium or large hospitals. Earnings are also higher, the higher the percentage of hospital revenues derived from third party payers.

Shalit, S.S. "A Doctor-Hospital Cartel Theory." *Journal of Business* 50 (January 1977):1-20.

The traditional explanation for the existence of a physician cartel is incomplete, according to the author of this article. The imposition of entry barriers in the hospital industry is necessary to maintain this power and to exploit it profitably. The easiest way to enforce control over hospitals is to have the physician cartel directly intervene in the factor market, by blocking entry of hospitals beyond the profit maximizing level. If barriers are effective, then the problem becomes the allocation of existing beds among doctors. This is done by a nonprice rationing system of allocating hospital "privileges." The medical staff model is the "textbook prototype of a self-policing, quota-allocating cartel" (p.9). The theory implies that prices of health services would be higher in controlled markets and was tested using a sample of 20 cities in 1960-62, and all states in 1968 for which data were available. The fact that significant negative relationships were obtained for all alternative measures of the hospital/doctor ratio is viewed as support for the cartel theory.

Shepard, L. "Licensing Restrictions and the Cost of Dental Care." *Journal of Law and Economics* 21 (Spring 1978):187-201.

The author assesses how licensing practices by state authorities impact on access to dental services by examining differences in dental fees between reciprocity and nonreciprocity states. Data are from the 1970 American Dental Association National Dental Fee Survey, reflecting average fees charged by 10,000 responding dental practitioners. An econometric model is constructed with four structural equations simultaneously determining practitioner supply, the demand and supply of dental care, and dental earnings. Tabular results indicate that for 11 of the 12 most

common services, fees were higher in states without reciprocity provisions. Average dentist net income is also significantly higher in nonreciprocity states. Multivariate results also evidence these patterns. Estimates of the price of dental services and mean dental income are 12-15 percent higher in nonreciprocity jurisdictions, holding other factors constant, than in reciprocity states.

Shulman, D. and Galanter, R. "Reorganizing the Nursing Home Industry: A Proposal." *Milbank Memorial Fund Quarterly/Health and Society* 54 (Spring 1976):129-143. A restructuring of the nursing home industry is proposed in this article. According to the proposal, capital facilities would be owned by the public sector but management would be conducted through private sector contracts with competitive bidding. The proposed management contract would require successful performance of contract specifications in order to obtain reimbursement. A description of the disastrous state of the nursing home industry is presented along with a financial model of a typical nursing home. The proposed changes in the structure of the industry would, according to the authors, eliminate substantial capital requirements as an entry barrier, mitigate against collusion by bidders, and prevent underbedding in some areas and overbedding in others.

Sloan, F.A. "Effects of Incentives on Physician Performance." In *Health Manpower and Productivity: The Literature and Required Future Research*, edited by J. Rafferty. Lexington, Massachusetts: Lexington Books, 1974.

The objective of this paper is to suggest areas for future research regarding the impacts of group alternative practice arrangements on physician performance. Models are developed which reflect the different incentive structures inherent in alternative organizational forms of physician practice. These models then predict the effects of these incentives on such variables as output of services, price, and input purchase decisions. Different cost-sharing mechanisms are modeled. Cost-sharing physicians are hypothesized to set output higher and prices lower than those without such cost-sharing arrangements. At the same time, the incentive to reduce costs is lower under cost-sharing and is negatively associated with the size of the group. Under salaried arrangements, workloads are expected to fall to minimum "acceptable" levels with no incentive for the individual physician to monitor costs. After reviewing the available literature on the relationship of alternative organizational arrangements to physician performance, the author suggests that more research is needed on the structure of incentives in medical practice.

Sloan, F.A. "Physician Fee Inflation: Evidence From the Late 1960's." In *The Role of Health Insurance in the Health Services Sector*, edited by R.N. Rosett. New York: National Bureau of Economic Research, 1976.*

A model of physician pricing and output decisions is constructed and then tested with state cross-sectional data covering the four years between 1967 and 1970. Two price variables are used as dependent variables: (1) the usual fee charged by the physician; and (2) the physician's average revenue. Fee data and information regarding physician characteristics are taken from annual surveys of physicians' practices conducted by the American Medical Association. Third-party reimbursement, particularly Medicare has a more consistent, positive impact on average revenue than on physician fees, although the associated elasticities are low (0.6 to 0.75). Therefore, the empirical results support the notion that the impact of insurance on physician pricing decisions is felt primarily through standard headings such as a follow-up office and/or hospital visits, the extent of price discrimination, and the number and complexity of procedures performed. Other physician characteristics such as age, board certification status, and medical school location are found to have no systematic effects on physician pricing patterns.

*Also see Sloan and Steinwald (1977).

Sloan, F.A. "Effects of Health Insurance on Physicians' Fees." Paper presented at the Southern Economic Association Meetings, November 6, 1980, Washington, D.C.

The objective of this study is to estimate the effect of health insurance on physicians' fees using data from the Physicians' Practice Cost Surveys conducted during 1977 and 1978 by the National Opinion Research Center under the sponsorship of the Health Care Financing Administration. Using the standard economic model of the firm, the author derives a number of predictions of the effect of third party reimbursement on physicians' fees. Tests of the model clearly establish a link between insurance and fees. The findings indicate that the physician's usual fee increases as the percentage of patients with private insurance rises. Also, the physician's usual fee increases as third party payors' fixed fee schedules rise. However, one question that could not be answered in the present study is the extent to which insurance changes the nature of medical care supplied. The author suggests that if higher fees are associated with higher quality, there is less reason for concern than if observed fee increases reflect increases in quality-adjusted prices.

Sloan, F.A. "Physicians and Blue Shield: A Study of Effects of Physician Control on Blue Shield Reimbursements." In *Issues on Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

An assessment of the impact of the relationship between Blue Shield and organized medicine on Blue Shield reimbursement levels is conducted. Physicians' willingness to participate in Blue Shield service benefit programs is also examined with respect to Blue Shield control. Dependent variables in the empirical analysis include Blue Shield payment data for several procedures and a binary variable indicating physician participation in Blue Shield. Explana-

tory variables include various measures of formal control of physicians over Blue Shield plans, proxies for consumer demand for insurance, factors expected to alter physician participation in Blue Shield, and individual physician characteristics. The core data base comes from national and regional samples of the 1975 Physicians' Practice Costs Survey. The results indicate that the most significant explanatory variables are those pertaining to Blue Shield plan characteristics, per capita income and specialty status. With regard to physician control factors, the findings suggest that physician control of Blue Shield boards does positively influence payment levels, but the results are not consistent across specialties. Physician control is also a determinant of physician participation in Blue Shield.

Sloan, F.A. "Government and the Regulation of Hospital Care." *American Economic Review* (forthcoming, May 1982).

55

Based on a review of recent economic research, this paper assesses the promise of two types of regulatory mechanisms for controlling hospital costs: (1) rate and revenue regulation; and (2) facilities and service regulations. Empirical research indicates that mandatory rate-setting holds considerable promise for cost containment. Descriptive and multivariate studies have found that growth in hospital expenses per admission, per patient day, and in total was substantially lower in states with mandated rate-setting than in other states. However, empirical research on facilities and service regulation such as state certificate of need laws indicate that such programs have not succeeded as mechanisms for controlling costs. The reasons for such failures are reported to be: incomplete regulatory coverage of capital expenditure projects; no areawide expenditure cap to force planners/regulators to compare projects on their selective merits; and, for most investment decisions, no operational concept of need.

Sloan, F.A. and Feldman, R. "Competition Among Physicians." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.*

The objective of this paper is to assess the extent of and implications for competition in the market for physicians' services. The paper is divided into four sections. The first section examines the supplier-created demand controversy in the physician market. The second section reviews the evidence on whether individual physicians have monopoly power; the relationships between physician concentration and earnings and between local monopoly power and product quality are examined; and the determinants of physician fee levels and fee dispersion within local markets are also discussed. The third section documents the effects of HMOs, PSROs, and recent health work force legislation on competition in the physicians' services market. Areas for further research are suggested and public policy suggestions for improving competition are made.

*Also see Blumstein and Sloan (1981).

Sloan, F.A. and Steinwald, B. "The Role of Health Insurance in the Physicians' Service Market." *Inquiry* 12 (December 1975):275-299.*

A comprehensive analysis of both the structure and impact of health insurance in the physicians' services market is presented, including a summary of the literature and new evidence. The authors note the more extensive coverage of surgical procedures and hospital visits and infer that relatively more of these services may be provided than would be the case if insurance were neutral. A simple model of physician price and output decisions is presented to indicate the potential role of health insurance on fee levels and utilization and to identify factors which distinguish between insurance with fee schedules and those with coinsurance and no maximum. Calculation of marginal and average coinsurance rates produce results which indicate that studies using average rates may result in biased estimates of the impact of insurance. Other evidence suggests that physicians may itemize services in the presence of insurance, leading to higher total billings, and that UCR reimbursement may be more inflationary than fee schedules.

*See also Steinwald and Sloan (1974).

Sloan, F.A. and Steinwald, B. *Insurance, Regulation, and Hospital Costs*. Lexington, Massachusetts: Lexington Books, 1980.

In this book the authors attempt to measure the impact on hospital costs and input utilization of health insurance coverage and various regulatory mechanisms such as controls on capital expenditure, revenue regulation, and utilization review. Using data from the American Hospital Association on a nationwide sample of hospitals, they analyze four different measures of hospital costs (average cost and average labor expense, per adjusted patient day and per admission). The results of their analysis indicate that private health insurance coverage has stimulated hospital costs in general and input use in particular. Their findings also suggest that regulatory programs did not do much to contain costs during the period examined—1970 to 1975. With respect to particular regulatory programs, the authors find that certificate-of-need programs may have actually raised costs per admission and per patient day over this period. Section 1122 and Blue Cross planning agency approval programs were found to have little or no impact on costs. Prospective reimbursement was found to have a small negative effect on costs and input use. The 1971-77 Economic Stabilization Program was one of the few programs which clearly had reduced hospital costs and the use of some inputs.

Stano, M. "Individual Health Accounts: An Alternative Health Care Financing Approach." *Health Care Financing Review* 3 (September 1981):117-125.

A market-oriented alternative to traditional forms of health insurance is introduced in this article. The proposed system of health accounts would have the following characteristics: (1) Rather than paying for health insurance, individuals and employers contribute to individual health accounts from

which each family purchases its health care. (2) Excess accumulations (over a designated minimum level) are distributed back to individuals. (3) Payments for those too poor to pay into such accounts or, if there is a net deficit to the fund, will come out of a national health insurance fund. The author contends that such an alternative solution induces individuals to act as though they are paying the full cost of their care but eliminates the possibility of anyone being denied care because of inability to pay.

Steele, H. "Monopoly and Competition in the Ethical Drugs Market." *Journal of Law and Economics* 5 (October 1962):131-163.

The objective of the paper is to evaluate market performance in the ethical drug industry. The author contends that the nature of the ethical drug industry has resulted in resource misallocations which favor the industry. These are due to unique conditions in the ethical drug market:

- The physician acts as the purchasing agent for the patient.
- Research can effect very minor product changes.
- Companies assign different brand names to identical products and market intensively.
- The industry is very concentrated.

The market performance in four drug product categories is examined. The conclusion is that price competition in the ethical drugs market is prevented primarily by patent privileges which allow the big drug firms to restrict output, thereby raising prices, and then to use the resulting profits to finance marketing campaigns to differentiate essentially homogeneous products. Solutions to the problem involve the abolition of the patent privilege and increased use of the FDA's inspection procedures.

Steuerle, E. and Hoffman, R. "Tax Expenditures for Health Care." *National Tax Journal* 32 (June 1979):101-115.

Tax expenditures for health care are examined, including the impact on the federal budget and on the price of and demand for health care. The authors estimate the revenue loss from the exclusion of employer contributions for medical care and the deductibility of medical expenses by individuals as about \$17 billion in 1979. The effect of the medical deduction is seen as a regressive redistribution of tax burdens. The effect of such employer exclusions and individual deductions is to reduce the after-tax price of health insurance and, therefore, of health care, with the reduction being of greatest value to the highest income classes. Because tax subsidies act to increase demand for care, they also tend to increase its market price. Various policy alternatives to alleviate these effects are discussed. The authors conclude that both equity and efficiency can be enhanced if tax expenditures are redesigned as direct subsidies.

Tessler, R. and Mechanic, D. "Factors Affecting the Choice Between Prepaid Group Practice and Alternative Insurance Programs." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):149-172.

The basis for decisions made in dual-choice health insurance situations is examined in this paper. Social, attitudinal, and health characteristics of individuals making each choice are also explored. The most frequent reasons given for the choice of a prepaid group practice option were comprehensiveness of coverage and the lack of a current, continuing relationship with a physician. Prepaid plan enrollees also were better educated and more likely to be unmarried. In addition, chronic conditions were present somewhat more frequently in prepaid plan enrollees.

Ting, H.M. "The Economics of Health Maintenance Organizations." Ph.D. dissertation, Stanford University, 1975.

Theoretical microeconomic models are developed for four types of HMOs: (1) the physician-controlled, prepaid group practice; (2,3) the for-profit and nonprofit, non-physician-controlled prepaid group practice; and (4) the medical care foundation form of HMO. Different incentives exist within these alternative forms and different behaviors are predicted. The author demonstrates that HMO competition will lead to a diversity of levels of coverage and premiums and an increase in efficiency in production of care. It is also shown that premiums will not always fall as a result of competition, instead competition in the form of quality and promotional activity may become more important. Evaluation of proposed HMO regulatory measures indicates that most regulations will reduce efficiency by reducing competition and will be ineffective as a means for improving distributional equity.

U.S. Congress, Congressional Budget Office. *Expenditures for Health Care: Federal Programs and Their Effects.* Washington, D.C.: U.S. Government Printing Office, August 1977.

Health expenditure trends, the effectiveness of current and past regulatory efforts, and cost containment strategies are reviewed in this paper. Three components of the trend toward increasing health expenditures are discussed, including demographic shifts in the population, price increases, and increases in the per capita utilization of health services. Federal policies contributing to the growth in health expenditures are also examined, together with regulatory efforts aimed at curbing these increases. Finally, alternative strategies to contain health expenditures are presented, such as altering existing hospital regulatory programs, controlling the supply of facilities and institutional services through such programs as certificate of need, restructuring the PSRO program, altering the underlying demand and supply factors in the medical market, and developing more information about the benefits and costs of new technologies.

U.S. Congress, Congressional Budget Office. *Tax Subsidies for Medical Care: Current Policies and Possible Alternatives.* Washington, D.C.: U.S. Government Printing Office, January 1980.

Tax provisions affecting medical care are analyzed. It is estimated that in fiscal year 1980, the revenue losses to the government from these provisions may exceed \$14.5 billion. The tax provisions analyzed are the employer exclusion, the deductibility of health insurance premiums, and the use of tax-exempt bonds to finance hospital facilities. The defects of each provision are discussed and possible alternatives are posed.

Vogel, R. "The Effects of Taxation on the Differential Efficiency of Nonprofit Health Insurance." *Economic Inquiry* 15 (October 1977):605-609.

In this article, the author extends research done earlier (Blair *et al.*, 1975) by addressing the question of whether taxation of nonprofit insurers has forced these plans to become more efficient administratively than nonprofit insurers which are exempt from such taxation. The hypothesis being tested is that nonprofit Blue plans which are taxed are forced to be controlled in order to compete with commercial plans. The regression model used to test this hypothesis is the 1975 model except that a tax rate variable is added as an independent and premium taxes paid are removed from the numerator of the dependent variable. The results indicate that, in states where nonprofit insurers are taxed, such insurers do operate more efficiently. The results also suggest that where nonprofit firms are given competitive advantages, they dissipate such cost advantages by increasing administrative costs.

Vogel, R. "The Tax Treatment of Health Insurance Premiums as a Cause of Overinsurance." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

The distortions in the demand for medical care resulting from the current tax treatment of insurance premiums are discussed in this article. The historical development of present tax policies is first described, then a simple model is presented to show why employees are indifferent to paying health insurance premiums in lieu of wages and why employees prefer income in the form of premiums rather than as wages. Previous empirical findings on the taxation issue are presented. These findings indicate that regardless of the tax criteria used—efficiency, horizontal equity, or vertical equity—the present treatment creates distortions, along with inducing substantial price increases. Finally, alternatives to the present tax policies are proposed, together with projections of costs that will be incurred by continuing the present policies.

Weiner, S.M. "Governmental Regulation of Health Care: A Response to Some Criticisms Voiced by Proponents of a Free Market." *American Journal of Law and Medicine* 4 (Spring 1978):15-33.

The author takes issue with criticisms of cost containment regulation in the health care area, particularly those expressed by Professor Havighurst. The author's two basic criticisms of Havighurst's approach are: (1) the competitive market model is not suitable for an evaluation of regulatory activities; and (2) that regulatory objectives must be defined in political terms, incorporating other factors besides the economic ones. Rather than a wholesale scrapping of existing regulatory activities, the author advocates that a more careful analysis be done to determine an appropriate role for regulatory processes so that they can achieve their economic and political objectives.

Wennberg, J. et al. "An Epidemiological Perspective on the Problem of Supplier-Induced Demand: The Case of Surgery and Surgical Second Opinions." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

The use of medical services and expenditures varies significantly among comparable populations living in neighboring localities. In this article the authors examine variations in rates of common surgical procedures such as prostatectomies, tonsillectomies, and hysterectomies in order to see to what extent the characteristics of physicians influence these variations. The authors hypothesize that decision rules differ substantially among surgeons with regard to how such operations should be distributed. They find support for their hypothesis in the fact that surgical rates for specific procedures in the five largest hospital services in Maine vary markedly across areas and appear to vary independently of the total operation rate. Also specific surgical procedures are found to have characteristic patterns of variation. Data on the use of the Second Surgical Opinion Programs indicate that the program will not reduce rates.

Wilensky, G.R. "Government and the Financing of Health Care." *American Economic Review* (forthcoming, May 1982).

The purpose of this paper is to provide estimates of the growth and distributional effects of three government health programs: Medicare; Medicaid; and an indirect health care subsidy resulting from tax savings for certain groups of taxpayers allowed by the tax code. Total government expenditures on Medicare increased at an average annual growth rate of 17 percent between 1975 and 1977. The corresponding figure for Medicaid was 13 percent over the same time period. Individual tax savings from the exclusion of employer-paid insurance premiums from taxable income and from the tax deductibility of certain medical expenses, based on Treasury Department estimates, increased at an annual growth rate of 19 percent over this period. With respect to the distributional effects of govern-

ment expenditures for these programs, the distribution of Medicaid expenditures favoring the poor is offset by the distribution of tax expenditures in terms of premiums and other medical deductibles, which favors the high-income sector. Overall, the government spends about the same on the poor and near poor as it does on the middle income and high income population.

Wolinsky, F.D. "The Performance of Health Maintenance Organizations: An Analytic Review." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):537-587.*

In this paper, the author examines the evidence on HMO performance by: (1) reviewing the nine most often cited reviews of the HMO performance literature; (2) identifying the incentive and disincentive structures operating within HMOs; (3) exposing the methodological problems associated with evaluating the performance of HMOs; and (4) analytically reviewing the recent literature evaluating the performance of HMOs. The review of nine reviews of performance literature leads the author to conclude that agreement is present that: (1) hospitalization rates are lower for PGP enrollees (though not necessarily for IPA members); (2) total costs are less in PGPs (but not so clearly in IPAs); (3) higher rates of preventive care services utilization in HMOs appear to be a result of more extensive coverage; (4) HMO enrollees are more satisfied with technical quality of care and less satisfied with the physician-patient relationship; and (5) quality of care appears approximately equivalent in HMO and fee-for-service practice. The author stresses that the major gap in the literature is that the mechanisms through which reduced costs and lower hospitalizations are achieved are still unknown. One reason for this is that HMOs are not clearly defined, and that at least eight different types exist which are often grouped together for analysis. In addition, a number of methodological problems are identified which make interpretation of results of analyses of HMO performance ambiguous. As a result, very little can be conclusively stated about performance of HMOs.

*Also see Wolinsky and Covey (1981).

Woodward, A. "The U.S. Health Insurance Industry: An Alternative View." *International Journal of Health Services* 8 (1978):491-507.

A description of the health insurance industry, including an historical sketch, entry barriers, and premium cost structure is provided in this article. Using this background, the author describes the implications of this structural form for pricing of premiums, hospitalization costs, cost controls, and regulatory controls over insurers. The health insurance pricing mechanism is structured in a price leadership fashion. Premium prices are higher than they would be without such a structure. Regulation has been ineffective and the costs of hospital care have increased beyond what would be expected with a "cost pass-through" system.

Woodward, R.S. and Warren-Boulton, F. "Physician Productivity and Remuneration Method." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan.

Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

Alternative physician remuneration methods, physicians' income levels, and use of practice inputs are examined. Three remuneration methods are considered: (1) physician's income is fixed regardless of level of output; (2) income is proportional to the production of medical care; and (3) income is proportional to time spent in patient contact. The conceptual model of physicians' earnings incorporates features of both the income-leisure and profit-maximization models. This conceptual model suggests less income, less time at work, and lower work expenditures under a salaried system. The 1976 Physicians' Practice Costs Survey is used as the primary data base. The empirical results confirm lower earnings and practice expenses for those with fixed incomes. However, salaried physician employees of single doctors work longer hours and make more patient visits per dollar of net income. There is no significant association between physician density and net income, providing support for a limited interpretation of supplier-induced demand.

Zeckhauser, R.J. and Zook, C.L. "Failures to Control Health Costs: Departures from First Principles." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

The authors discuss the reasons that have been used to justify government intervention in the market. They assess the characteristics of the health care market and do not find compelling inefficiency or other generally accepted reasons for public sector intervention. In addition, medical care is said to possess few of the characteristics which are con-

cive to effective regulation. For example, products are heterogeneous, elasticities are substantial, and the problem is with the average performer in the system, not a few bad performers. For these reasons the authors feel that improved performance may lie in one of four areas: (1) greater reliance on the private sector to control costs; (2) new delivery modes; (3) new and less bureaucratic regulatory modes; and (4) increased reliance on incentives, such as promoting preventive care or assuring access to high cost users of care.

Zelten, R.A. "Consequences of Increased Third-Party Payments for Health Care Services." *Annals of the American Academy of Political and Social Science* 433 (May 1979):25-40.

59

The adverse consequences of health insurance programs are presented together with a statement of why the future of private health insurance depends on a resolution of these problems. First, a description of the evolution of payment for personal health care services is presented. Second, the dimensions of current health care expenditures are described. Finally, the consequences of the growth of third party reimbursement programs are noted. These include the fact that, when physicians' fiscal responsibility for containing their patients' costs was lessened, the results included the introduction of a bias in favor of nonprimary care providers, a geographic maldistribution of physicians, oversupply of hospital beds, increased inflation in hospital and physician fee levels, and various inequities across programs, hospitals and patients. The author concludes that the perverse economic incentives operating in the health care market generally are a result of the current system of health insurance.

Bibliography

61

This bibliography has been assembled through a comprehensive effort to obtain citations on research or policy issues related to competition in the health care sector. Methods of acquiring citations included:

- Reviewing the private files and bibliographies of the Project Director, project staff, Project Officer, and consultants;
- Providing a copy of the initial bibliography to over 100 individuals who have conducted research on this topic in academia, government, and the private sector, and requesting that they provide additional citations as appropriate;
- Conducting a search of a variety of computerized data bases, including NTIS, MEDLINE, EXCERPTA MEDICA, ECONOMIC ABSTRACTS, SOCIAL SCIENCE ABSTRACTS, SCISEARCH, FEDERAL INDEX, and MEDLARS; and
- A manual library search of economic and health journals.

These methods yielded several thousand citations which were then screened for relevance to the issues of concern. The result of this screening process was a reduction of the number of references to the nearly 1,000 presented in the bibliography. An effort has been made to identify both published and unpublished research for inclusion in this bibliography. However, for unpublished research and for published work which has appeared in unconventional journals or in sources which are not widely disseminated, we have had to depend upon our own knowledge and the assistance of the research community. It is possible, therefore, that there are omissions from this bibliography which would be of interest to researchers and policymakers. We have made every effort, however, to minimize the number of these omissions.

Bibliography of research on competition in the financing and delivery of health services

Annotated references are marked with an "*"

Aaron, H. "Economic Aspects of the Role of Government in Health Care." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag, and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

Abernathy, D.S. and Pearson, D.A. *Regulating Hospital Costs: The Development of Public Policy*. Ann Arbor: Alpha Press, 1979.

Abramowitz, J. and Berg, L. "A Four-Year Study of the Utilization of Dental Assistants with Expanded Functions." *Journal of the American Dental Association* 87 (September 1973):623-635.

Ackerman, F.K., Jr. "Competition and Regulation: The Consumer Choice Health Plan Alternative." *Medical Group Management* 4 (July/August 1980): 58-64.

Acton, J.P. "Nonmonetary Factors in the Demand for Medical Care: Some Empirical Evidence." *Journal of Political Economy* 83 (June 1975):595-615.

Acton, J.P. "Demand for Health Care Among the Urban Poor, With Special Emphasis on the Role of Time." In *The Role of Health Insurance in the Health Services Sector*, edited by R. Rosett. New York: National Bureau of Economic Research, 1976.

Aday, L. "Economic and Non-Economic Barriers to the Use of Needed Medical Services." *Medical Care* 13 (June 1975):447-456.

Alchian, A. and Kessel, R. "Competition, Monopoly, and the Pursuit of Money." In *Aspects of Labor Economics*. New York: National Bureau of Economic Research, 1962.

Altman, S.H. et al. "Ambulatory Care: An Analysis of Costs in Alternate Settings: Current Knowledge on Use and Expenditures." Background Paper, November 1980, University Health Policy Consortium, Waltham, Massachusetts.

Altman, S.H. and Blendon, R., eds. *Medical Technology: The Culprit Behind Health Care Costs?* DHEW Publi-

cation No. (PHS) 79-3216. Washington, D.C.: Department of Health, Education, and Welfare, 1979.

***Altman, S.H. and Sochowitzky, E.** "The Cost of Ambulatory Care in Alternative Settings: A Review of Major Research Findings." *Annual Review of Public Health* 2 (1981):117-143.

Altman, S.H. and Weiner, S.L. "Regulation as a Second Best." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1979.

Altman, S. and Wallack, S.S. "Reshaping the Medicaid Program for the 1980s: The Prudent Buyer Approach." *Commonwealth Forum Proceedings*. Lake Bluff, Illinois (August 1981).

American Dental Association, Council on Dental Care Programs. *Fact Sheet: Dental Insurance*. Chicago, Illinois: American Dental Association, 1980.

American Hospital Association, Office of Public Policy Analysis. *Consumer Choice: Major Policy Issues*. Chicago, Illinois: American Hospital Association, 1981.

American Medical Association. *National Commission on the Cost of Medical Care 1976-1977, Vol 1-3*. Chicago, Illinois: American Medical Association, 1978.

***Anderson, K.B. et al.** *Physician Control of Blue Shield Plans: A Further Discussion of the Issues*. Washington, D.C.: Federal Trade Commission, January 1981.

Anderson, O.W. and May, J.J. "The Federal Employees Health Benefits Program, 1961-1968: A Model for National Health Insurance." In *Health Administration Perspectives*. Chicago, Illinois: Center for Health Administration Studies, University of Chicago, 1971.

Anderson, O.W. and Sheatsley, P.B. *Comprehensive Medical Insurance — A Study of Costs, Use, and Attitudes Under Two Plans*. Chicago, Illinois: Center for Health Administration Studies, University of Chicago, 1959.

Anderson, O.W. and Sheatsley, P.B. *Hospital Use — A Survey of Patient and Physician Decisions*. Chicago, Illinois: Center for Health Administration Studies, University of Chicago, 1967.

Anderson, R.K. et al. "A Theory of Physician Behavior with Supplier-Induced Demand." *Southern Economic Journal* 48 (July 1981):124-133.

Andersen, R. and Riedel, D.C. *People and Their Hospital Insurance: Comparisons of the Uninsured, Those With One Policy, and Those With Multiple Coverage: Research Series 23*. Chicago, Illinois: Center for Health Administration Studies, University of Chicago, 1968.

Applied Management Sciences and the University of California at San Francisco, Health Policy Program. *A Synthesis of the Research Findings on the Operations and Performance of Health Maintenance Organizations*. Report submitted under NCHSR Contract No. 233-79-3016, 1981.

Arnould, R.J. and Eisenstadt, D. "Blue Shield Fee Setting in the Physicians' Services Market: A Theoretical and Empirical Analysis." Report submitted under NCHSR Grant No. HSO1539.

***Arnould, R.J. and Eisenstadt, D.** "The Effects of Provider-Controlled Blue Shield Plans: Regulatory Options." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

Arras, J.D. "Health Care Vouchers and the Rhetoric of Equity: A Critique of Free Market Selections." *The Hastings Center Report* 11 (August 1981):29-42.

***Arrow, K.J.** "Uncertainty and the Welfare Economics of Medical Care." *The American Economic Review* 53 (December 1963):941-973.

Arrow, K.J. "Further Comment on the Economics of Moral Hazard." *The American Economic Review* 58 (June 1968):537-538.

***Association of American Medical Colleges.** *Price Competition in the Health Care Marketplace: Issues for Teaching Hospitals*. Washington, D.C.: Association of American Medical Colleges, 1981.

Association of American Medical Colleges, Department of Teaching Hospitals. *Toward A More Contemporary Public Understanding of the Teaching Hospital*. Washington, D.C.: Association of American Medical Colleges, 1981.

Auger, R.C. and Goldberg, V.P. "Prepaid Health Plans and Moral Hazard." *Public Policy* 22 (Summer 1974):353-398.

***Auster, R.D. and Gordon, J.G.** "Individual Responsibility Incentives for the Health Sector." In *Policy Analysis and Deductive Reasoning*, edited by G. Tullock

and R.E. Wagner. Lexington, Massachusetts: Lexington Books, 1978.

***Auster, R.D. and Oaxaca, R.L.** "Identification of Supplier Induced Demand in the Health Care Sector." *Journal of Human Resources* 16 (Summer 1981):327-342.

Auster, R.D. et al. "The Production of Health: An Exploratory Study." *Journal of Human Resources* 4 (Fall 1969):411-436.

Averch, H. and Johnson, L.L. "Behavior of the Firm Under Regulatory Constraint." *American Economic Review* (December 1962):1052-1069.

Babayan, R.K. and Katzmman, E. "The Catch-22's of Cost Containment." *Journal of Urology* 122 (1979):283-286.

Badgley, R.F. and Smith R.D. *User Charges for Health Services*. Toronto, Ontario: Ontario Council of Health, 1979.

Bailey, R.M. "Economics of Scale in Medical Practice." In *Empirical Studies in Health Economics*, edited by H. Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.

***Bailey, R.M.** "From Professional Monopoly to Corporate Oligopoly: The Clinical Laboratory Industry in Transition." *Medical Care* 15 (February 1977):129-146.

Bailey, R.M. *Clinical Laboratories and the Practice of Medicine*. Berkeley, California: McCutchan, 1979.

Battistella, R.M. and Eastaugh, S.R. "Hospital Cost Containment: The Hidden Perils of Regulation." *Bulletin of the New York Academy of Medicine* 56 (1980):62-82.

Bauer, K. *Containing Costs of Health Services Through Incentive Reimbursement: Some Approaches by Third-Party Payers*. Boston, Massachusetts: Harvard Center for Community Health and Medical Care, 1973.

Bauer, K. "Hospital Ratesetting--The Way to Salvation?" In *Hospital Cost Containment: Selected Note for Future Policy*, edited by M. Zubkoff et al. New York: Prodist, 1978.

Bays, C.W. "Cost and Efficiency Comparisons of For-Profit and Nonprofit Hospitals." Paper presented at 1976 Health Economics Research Organization Meeting, September 1975, Atlantic City, New Jersey.

Bays, C.W. "Case-Mix Differences Between Non-profit and For-Profit Hospitals." *Inquiry* 14 (March 1977):17-21.

Bays, C.W. "Cost Comparisons of For-profit and Nonprofit Hospitals." *Social Science and Medicine* 13 (1979):219-225.

- Bays, C.W.** "Prospective Payment and Hospital Efficiency." *Quarterly Review of Economics and Business* 20 (Spring 1980):76-86.
- Beck, R.G.** "The Effects of Copayment on the Poor." *Journal of Human Resources* 9 (Winter 1974):129-142.
- Becker, G.S.** "Irrational Behavior and Economic Theory." *Journal of Political Economy* 70 (February 1962):1-13.
- Begun, J.W.** *Professionalism and the Public Interest: Price and Quality in Optometry*. Cambridge, Massachusetts: The MIT Press, 1981.
- Begun, J.W. et al.** "Occupational Regulation in the States: A Causal Model." *Journal of Health Policy, Politics, and Law* 6 (Summer 1981):229-254.
- Begun, J.W. and Feldman, R.D.** *A Social and Economic Analysis of Professional Regulation in Optometry*. DHHS Publication No. (PHS) 81-3295. Washington, D.C.: Department of Health and Human Services, 1981.
- Benham, L.** "The Labor Market for Registered Nurses: A Three Equation Model." *The Review of Economics and Statistics* 53 (August 1971):246-252.
- Benham, L.** "The Effects of Advertising on the Price of Eyeglasses." *Journal of Law and Economics* 15 (October 1972):337-352.
- Benham, L.** "Guilds and the Form of Competition in the Health Care Sector." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1979.
- Benham, L. and Andersen, R.** "Factors Affecting the Relationship Between Family Income and Medical Care Consumption." In *Empirical Studies in Health Economics*, edited by Herbert Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.
- *Benham, L. and Benham, A.** "Regulating Through the Professions: A Perspective on Information Control." *Journal of Law and Economics* 18 (October 1975):421-447.
- Benham, L. and Benham, A.** "Utilization of Physician Services Across Income Groups, 1963-1970." In *Equity in Health Services*, edited by R. Andersen et al. Cambridge, Massachusetts: Ballinger Publishing Co., 1975.
- Benham, L. and Benham, A.** "The Impact of Incremental Medical Services on Health Status, 1963-1970." In *Equity in Health Services*, edited by R. Andersen et al. Cambridge, Massachusetts: Ballinger Publishing Co., 1975.
- Benham, L. and Benham, A.** "Prospects for Increasing Competition in the Professions." In *The Profession and Public Policy*, edited by P. Slayton and M.J. Trebilcock. Toronto: University of Toronto Press, 1978.
- Benham, L. and Grossman, M.** "Health, Hours, and Wages." In *The Economics of Health and Medical Care*, edited by M. Perlman. London: Macmillan and Co., 1974.
- *Benham, L. et al.** "Migration, Location, and Remuneration of Medical Personnel: Physicians and Dentists." *Review of Economics and Statistics* 50 (August 1968):332-347.
- Berkanovic, E. et al.** "The Effects of Prepayment on Access to Medical Care: The PACC Experience." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):241-254.
- Berki, S.E.** "Economic Effects of National Health Insurance." *Inquiry* 8 (June 1971):37-55.
- *Berki, S.E. and Ashcraft, M.L.F.** "HMO Enrollment: Who Joins What and Why: A Review of the Literature." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):588-632.
- *Berki, S.E. et al.** "Enrollment Choice in a Multi-HMO Setting: The Roles of Health Risk, Financial Vulnerability, and Access to Care." *Medical Care* 15 (February 1977):95-114.
- Berman, H.** "Comment on 'Competition Among Health Insurers.'" In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.
- Berry, C. et al.** *Responses of Canadian Physicians to the Introduction of Universal Medical Care Insurance*. DHEW Publication No. (PHS) 80-3229. Washington, D.C.: Department of Health, Education, and Welfare, 1980.
- Berry, R.E.** "Cost and Efficiency in the Production of Hospital Services." *Milbank Memorial Fund Quarterly/Health and Society* 52 (Summer 1974):291-313.
- Berry, R.E.** "Prospective Rate Reimbursement and Cost Containment: Formula Reimbursement in New York." *Inquiry* 13 (September 1976):288-301.
- *Berry, R.E.** *On Excess Capital Accumulation in the Hospital Industry*. Background Paper, 1979, University Health Policy Consortium, Waltham, Massachusetts, 1979.
- Bevan, A.D.** "Cooperation in Medical Education and Medical Service." *Journal of the American Medical Association* 90 (1978):1176.
- *Bice, T.W.** "Risk Vulnerability and Enrollment in a Prepaid Practice." *Medical Care* 13 (August 1975):698-703.

- Biles, B., et al.** "Hospital Cost Inflation Under State Rate Setting Programs." *New England Journal of Medicine* 303 (1980):663-668.
- *Bishop, C.E.** *Nursing Home Behavior Under Cost-Related Reimbursement*. Waltham, Massachusetts: Center for Health Policy and Research, Brandeis University, 1979.
- Bishop, C.E.** *Nursing Home Cost Studies and Reimbursement Issues*. Waltham, Massachusetts: University Health Policy Consortium, Spring 1980.
- Bishop, C.E.** "Nursing Home Cost Studies and Reimbursement Issues." *Health Care Financing Review* 2 (Spring 1980):47-64.
- *Blackstone, E.A.** "Market Power and Resource Misallocation In Medicine: The Case of Neurosurgery." *Journal of Health Politics, Policy and Law* 3 (Fall 1978):345-360.
- *Blair, R.D. et al.** "Economies of Scale in the Administration of Health Insurance." *Review of Economics and Statistics* 57 (May 1975):185-189.
- *Blair, R.D. et al.** "Blue Cross-Blue Shield Administration Costs: A Study of Non-Profit Health Insurers." *Economic Inquiry* 13 (June 1975):237-251.
- Bloom, A.** "Antitrust Cloud Over IPA-HMOs Needs Congress to Blow It Away." *Health Services Information* (January 12, 1981):4-6.
- *Bloom, P.N. and Stiff, R.** "Advertising and the Health Care Professions." *Journal of Health Politics, Policy, and Law* 4 (Winter 1980):642-656.
- Blue Cross Association.** "Utilization Review and Control Activities in Blue Cross Plans." *Blue Cross Reports* 4 (January-March 1966):12-16.
- Blue Cross and Blue Shield Association.** *Competition and Consumer Choice: National Health Care Legislative Proposals*. Washington, D.C.: Blue Cross and Blue Shield Association, 1981.
- Blumberg, M.S.** "Provider Price Changes for Improved Health Care Use." in *Health Handbook*, edited by G.K. Chacko. Amsterdam: North-Holland Publishing Co., 1979.
- *Blumberg, M.S.** "Health Status and Health Care Use by Type of Private Health Coverage." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Winter 1980):633-655.
- Blumberg, M.S.** "Physician Fees as Incentives." In *Proceedings of the Twenty-First Annual Symposium on Hospital Affairs, 1979*. Chicago, Illinois: Center for Health Administration Studies, Graduate School of Business, University of Chicago, 1980.
- Blumstein, J.F. and Sloan, F.A.** "Redefining Government's Role in Health Care: Is a Dose of Competition What the Doctor Should Order?" *Vanderbilt Law Review* 34 (May 1981):849-926.
- Blumstein, J.F. and Zubkoff, M.** "The Medical Marketplace: Health Policy Formulation in Consideration of Economic Structure." In *National Commission on the Costs of Medical Care, 1976-77, Vol 2*. Chicago, Illinois: American Medical Association, 1978.
- *Blumstein, J.F. and Zubkoff, M.** "Public Choice in Health: Problems, Politics and Perspectives." *Journal of Health Policy, Politics and Law* 4 (Fall 1979):382-413.
- Bond, R.S. et al.** *Staff Report on Effects of Restrictions on Advertising and Commercial Practice in the Professions: The Case of Optometry*. Washington, D.C.: Federal Trade Commission, Bureau of Economics, 1980.
- *Bovbjerg, R.R.** "Competition vs. Regulation In Medical Care: An Overdrawn Dichotomy." *Vanderbilt Law Review* 34 (May 1981):965-1002.
- Brandon, W.P. et al.** "Health Planning/Regulation and Market Competition: An Empirical Analysis of the HSA-HMO Relationship." Paper Presented at the Annual Meeting of the American Society for Public Administration, April 1980, Detroit, Michigan.
- Brandon, W.P. et al.** "Testing the Anti-Regulatory Arguments of the Market Reformers: New Data on the HMO-HSA Relationship." *Journal of Health and Human Resources Administration* 2 (May 1980):391-428.
- Breindel, C.L.** "The Myth of Micro and Macro Health Planning." *Hospitals and Health Services Administration* (Special Issue no. 1) 25 (1980):38-47.
- Breslow, L.** "Risk Factor Intervention for Health Maintenance." *Science* 200 (1978):908-913.
- Brian, E. and Gibbens, S.** "California's Medi-Cal Copayment Experiment." *Medical Care* 12 (December 1974):1-303.
- Brook, R.H. and Williams, K.N.** "Evaluation of the New Mexico Peer Review System, 1971-1973." *Medical Care* 14 ((Supplement) December 1976):1-122.
- Brook, R.H. et al.** "Effectiveness of Inpatient Follow Up Care." *New England Journal of Medicine* 285 (1971):1509.
- *Brown, L.D.** "Competition and Health Cost Containment: Cautions and Conjectures." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):145-189.
- *Brown, D.N. and Lapan, H.E.** "Analysis of Physicians' Input Decisions." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

- Buchanan, J.M. and Pauly, M.V.** "On the Incidence of Tax Deductibility." *National Tax Journal* 23 (June 1970):157-167.
- Buchberger, T.J.,** *Medicaid: Choices for 1982 and Beyond.* Washington, D.C.: Congress of the United States, Congressional Budget Office, June 1981.
- Budde, N.W. and Meeker, E.F.** "The Medical Care Market Place: A Review of the Literature." In *National Commission on the Cost of Medical Care, Vol. 3.* Chicago, Illinois: American Medical Association, 1978.
- Bureau of Health Manpower.** *The Target Income Hypothesis and Related Issues in Health Manpower Policy.* DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.
- Burney, T. and Gabel, J.** "Reimbursement Patterns Under Medicare and Medicaid." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.
- Burney, I. et al.** "Geographic Variation in Physicians' Fees." *Journal of the American Medical Association* 240 (September 22, 1978):1368-1371.
- Burnside, J.W.** "Government Sees Competition Controlling Medical Costs." *Pennsylvania Medicine* 83 (October 1980):20-22.
- *Cady, J.F.** *Restricted Advertising and Competition: The Case of Retail Drugs.* Washington, D.C.: American Enterprise Institute, 1976.
- Cantwell, J.R.** "Copayments and Consumer Search: Increasing Competition in Medicare and Other Insured Medical Markets." *Health Care Financing Review* 3 (December 1981):65-76.
- Caper, P.** "Sounding Boards: Competition and Health Care--Caveat Emptor." *New England Journal of Medicine* 304 (May 21, 1981):17-18.
- Chang, C.F.** "Towards a Better Understanding of Health Care Economics." *Medical Group Management* 28 (March/April 1981):48-52.
- Chapman, C.B. and Talmadge, J.M.** "Historical and Political Background of Federal Health Care Legislation." *Law and Contemporary Problems* 35 (Spring 1970):334-347.
- Chiswick, B.R.** "Hospital Utilization: An Analysis of SMSA Differences in Occupancy Rates, Admissions Rates, and Bed Rates." *Explorations in Economic Research* 3 (Summer 1976):326-378.
- *Christianson, J.B.** *The Competitive Impact of Health Maintenance Organizations: Minneapolis-St. Paul.* Excelsior, Minnesota: InterStudy, 1978.
- Christianson, J.B.** "The Impact of Health Maintenance Organizations: Evidence and Research Issues." *Journal of Health Politics, Policy, and Law* 5 (Summer 1980):354-367.
- *Christianson, J.B. and McClure, W.** "Competition in the Delivery of Medical Care." *New England Journal of Medicine* 301 (October 11, 1979):812-818.
- Christianson, J.B. and McClure, W.** "Developing a Regulatory Strategy Consistent with a Competitive Health Care System." In *Socioeconomic Issues of Health*, edited by D. E. Hough and G. I. Misek. Chicago, Illinois: American Medical Association, 1980.
- *Clark, R.C.** "Does the Nonprofit Form Fit the Hospital Industry?" *Harvard Law Review* 93 (May 1980):1416-1489.
- Clarkson, K.W.** "Some Implications of Property Rights in Hospital Management." *Journal of Law and Economics* 15 (October 1972):363-384.
- Coffey, R.M. and Hornbrook, M.C.** "National Health Insurance Research Findings on Selected Issues." In *Health, United States, 1976-1977.* DHEW Publication No. (HRA) 77-1232. Washington, D.C.: Department of Health, Education, and Welfare, 1977.
- Coelen, C. and Sullivan, D.** "An Analysis of the Effects of Prospective Reimbursement Programs on Hospital Expenditures." *Health Care Financing Review* 2 (Winter 1981):1-40.
- Cohen, H.S.** "On Professional Power and Conflict of Interest: State Licensing Boards on Trial." *Journal of Health Politics, Policy and Law* 5 (Summer 1980):191-308.
- Colby, D.C. et al.** *An Analysis of the Survey of Medicaid Policies and Procedures for Durable Medical Equipment: A Preliminary Report.* Durable Medical Equipment Project Report Submitted Under HCFA Grant No. 18-P-97446/1-01, June 1980.
- Coleman, J.R. and Poplaski, S.C.** "A Survey of Dental Care Programs Offered by 'Qualified HMOs'." *Journal of Public Health Dentistry* 37 (1977):99-105.
- Comanor, W.S.** "Research and Competitive Product Differentiation in the Pharmaceutical Industry in the U.S." *Economica* 31 (November 1964):372-384.
- Comanor, W.S.** "Competition in Health Care and the Impact of Federal Tax Policy." Testimony before a Joint Session of the Oversight Subcommittee of the Ways and Means Committee and the Tax Expenditure Task Force of the Budget Committee, U.S. House of Representatives, July 9, 1979.

- *"Competition in the Health Services Market."** Hearings before the Subcommittee on Antitrust and Monopoly Committee on the Judiciary, U.S. Senate, May 14, 15, 17, 29, 30 and July 10, 1974.
- Comptroller General of the United States.** *Public Representation on Boards and Blue Shield Allowances: Important Relationship Not Found.* Document No. HRD-81-31, December 1980.
- *Conrad, D.A. and Emerson, M.L.** "State Dental Practice Acts: Implications for Competition." *Journal of Health Politics, Policy, and Law: Special Section on Dental Policy* 5 (Winter 1981):610-630.
- 68 **Conrad, D.A.** "State Practice Acts and Competition in the Market for Dental Services: Theory, Preliminary Empirical Tests and Directions for Future Research." *Inquiry*, in press.
- Conrad, D.A. and Sheldon, G.** *Competition As a Means to Contain Dental Care Costs.* Final Report, NCHSR Grant No. HS-03603, February 1981.
- *"Containment of Hospital Costs: A Strategic Assessment."** *Medical Care* 16 (Supplement October 1978).
- Corbin, M. and Krute, A.** "Some Aspects of Medicare Experience with Group Practice Prepayment Plans." Paper presented at the Annual Meeting of the American Public Health Association, October 1974, New Orleans, Louisiana.
- Costillo, L.B.** "Sounding Board: Competition Policy and the Medical Profession." *New England Journal of Medicine* 304 (April 30, 1981):1099-1102.
- Cotterill, P. and Gaffney, J.** "Medical Technology and Health Care Costs: A Review of the Literature." In *National Commission on the Cost of Medical Care, Vol. 3, Literature Reviews.* Chicago, Illinois: American Medical Association, 1978.
- Council on Wage and Price Stability.** "Employee Health Care Benefits: Labor Management Innovations in Controlling Costs." *Federal Register* 41 (September 1976):40298-40326.
- Council on Wage and Price Stability.** *The Complex Puzzle of Rising Health Care Costs: Can the Private Sector Fit It Together?* Washington, D.C.: Executive Office of the President, December 1976.
- Cowing, T.G. and Holtmann, A.G.** "The Multiproduct Short-Run Hospital Cost Function: Empirical Evidence and Policy Implications from Cross-Section Data." Working Paper, May, 1981, SUNY-Binghamton, Department of Economics Binghamton, New York.
- Cowing, T.G. et al.** "Hospital Cost Analysis: A Survey of Econometric Studies." In *Advances in Health Economics and Health Services Research.* Greenwich, Connecticut: JAI Press, forthcoming.
- Crandall, R.W.** "The Impossibility of Finding a Mechanism to Ration Health Care Resources Efficiently." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.
- Crew, M.** "Coinsurance and the Welfare Economics of Medical Care." *American Economic Review* 59 (December 1969):906-908.
- *Cromwell, J. et al.** "Physician Administrative Costs and Medicaid Participation." In *Physician and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.
- *David, J.L.** "Health Professionals' Access to Hospitals: A Retrospective and Prospective Analysis." *Vanderbilt Law Review* 34 (May 1981):1161-1202.
- Davidson, S.M. et al.** "Consumer Cost-Sharing As A Means To Reduce Health Care Costs." *Pediatrics* 65 (1980):168-169.
- Davis, K.** "Economic Theories of Behavior in Non-profit Private Hospitals." *Economic and Business Bulletin* 24 (Winter 1972):1-13.
- Davis, K.** "Medical Payments and Utilization of Medical Services by the Poor." *Inquiry* 13 (June 1976):12-135.
- Davis, K. and Reynolds, R.** "The Impact of Medicare and Medicaid on Access to Medical Care." In *The Role of Health Insurance in the Health Services Sector*, edited by R.N. Rosett. New York: National Bureau of Economic Research, 1976.
- *Davis, K. and Russell, L.** "The Substitution of Hospital Outpatient Care for Inpatient Care." *Review of Economics and Statistics* 54 (September 1972): 109-120.
- Davis, R.** *Cost Containment and Chiropractic.* Oxon Hill, Maryland: Maryland Chiropractic Association, 1981.
- Deacon, R. et al.** "Analysis of Variations in Hospital Use by Medicare Patients in PSRO Areas, 1974-1977." *Health Care Financing Review* 1 (Summer 1979):79-108.
- Deane, R.T. and McClung, R.** *An Investigation of the Role of Podiatry in Total Health Care.* Silver Spring, Maryland: Applied Management Sciences, October 1977.
- Densen, P.M. et al.** "Longitudinal Analyses of Four Years of Experience of a Prepaid Comprehensive

Medical Care Plan." *Milbank Memorial Fund Quarterly* 36 (January 1958):5-45.

Densen, P.M. et al. "Prepaid Medical Care and Hospital Utilization in a Dual Choice Situation." *American Journal of Public Health* 50 (November 1960):1710-1726.

Densen, P.M. et al. "Comparison of a Group Practice and a Self-Insurance Situation." *Hospitals* 36 (November 1962):63-68, 138.

Densen, P.M. et al. "Prepaid Medical Care and Hospital Utilization: Comparison of a Group Practice and a Self-Insurance Situation." *Hospitals* 36 (November 16, 1962):62-68, 138.

Department of Health Administration, Duke University. *Journal of Health Politics, Policy and Law: Special Section on Dental Policy* 5 (Winter 1981):586-689.

Derzon, R. et al. "Not-for-profit Chains Share in Multihospital System Boom." *Hospitals* (May 16, 1981):65-71.

Dimieri, R. and Weiner, S. "The Public Interest and Governing Boards of Nonprofit Health Care Institutions." *Vanderbilt Law Review* 34 (May 1981):1029-1066.

Doherty, N. "Competition in the Provision of Dental Services--Impacts on Providers and Consumers: An Introduction." *Journal of Health Politics, Policy, and Law: Special Section on Dental Policy* 5 (Winter 1981):588-592.

Donabedian, A. "An Evaluation of Prepaid Group Practice." *Inquiry* 6 (September 1969):3-27.

Donabedian, A. "Models for Organizing the Delivery of Personal Health Services and Criteria for Evaluating Them." *Milbank Memorial Fund Quarterly/Health and Society* 50 (October, 1972):103-154.

Donabedian, A. *Benefits in Medical Care Programs*. Cambridge, Massachusetts: Harvard University Press, 1976.

Dorfman, R. and Steiner, P. "Optimal Advertising and Optimal Quality." *American Economic Review* 44 (December 1954):826-836.

Douglas, G.W. and Miller, J.C. III. "Quality Competition, Industry Equilibrium, and Efficiency in the Price-Constrained Airline Market." *American Economic Review* 64 (September 1974):657-668.

Dowd, B. et al. "Applying the Model of Perfect Competition to the Health Care Industry." Minneapolis, Minnesota: Center for Health Services Research, University of Minnesota, 1980.

Dowling, W.H. "Prospective Reimbursement of Hospitals." *Inquiry* 11 (1974):163-180.

Drake, D.F. "Struggle Over Health Care Controls Continues." *Hospitals* 55 (April 1, 1981):159-164.

Dresch, S.P. "Marginal Wage Rates, Hours of Work, and Returns to Physician Training and Specialization." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

Dresnick, S. et al. "The Physician's Role in the Cost Containment Problem." *Journal of the American Medical Association* 241 (April 13, 1979):1606-1609.

DuBrul, P. "Health Politics, Cost Containment, and Government Efficiency." *Bulletin of the New York Academy of Medicine* 56 (1980):103-106.

Dumbaugh, K. and Newhauser D. "The Effect of Pre-Admission Testing on Length of Stay." In *Organizational Research in Hospitals*, edited by S.M. Shortell and M. Brown. Chicago, Illinois: Blue Cross Association, 1976.

***Dutton, D.B.** "Patterns of Ambulatory Use in Five Health Care Delivery Systems." *Medical Care* 17 (March 1979):221-243.

***Dyckman, Z.T.** *A Study of Physicians' Fees*. Washington, D.C.: Council on Wage and Price Stability, March 1978.

Eamer, R.K. "For-Profits Are Measurably More Efficient: Corporation Executive." *Modern Hospital* 116 (April 1971):116.

Edwards, F.R. "Managerial Objectives in Regulated Industries: Expense-Preference Behavior in Banking." *Journal of Political Economy* 85 (February 1977):147-162.

Egdahl, R.H. "Promising Approaches to Cost Containment: An Industry View." *Bulletin of the New York Academy of Medicine* 56 (1980):157-163.

***Egdahl, R.H. and Walsh, D.C.** "Industry-Sponsored Health Programs: Basis For a New Hybrid Prepaid Plan." *New England Journal of Medicine* 296 (1977):1350-1353.

Egdahl, R.H. and Walsh, D.C., eds. *Industry and HMOs: A Natural Alliance*. New York: Springer-Verlag, 1978.

Egdahl, R.H. et al. "Method of Physician Payment and Hospital Length of Stay." *New England Journal of Medicine* 296 (February 1977):339-340.

***Egdahl, R.H. et al.** "The Potential of Organizations of Fee-For-Service Physicians For Achieving Significant Decreases in Hospitalization." *Annals of Surgery* 186 (September 1977):388-399.

- Egdahl, R.H. et al.** "Fee-for-Service Health Maintenance Organizations." *Journal of the American Medical Association* 241 (February 1979):588-591.
- ***Eggers, P.W.** "Risk Differential Between Medicare Beneficiaries Enrolled and Not Enrolled in an HMO." *Health Care Financing Review* 1 (Winter 1980):91-99.
- Eggers, P.W.** "Pre-Enrollment Reimbursement Patterns of Medicare Beneficiaries Enrolled in 'At Risk' HMOs." *Health Care Financing Review*, in press.
- ***Ehrlich, I. and Becker, G.S.** "Market Insurance, Self-Insurance, and Self Protection." *Journal of Political Economy* 80 (July/August 1972):623-648.
- Eilers, R.D.** *Regulation of Blue Cross-Blue Shield Plans*. Homewood, Illinois: S. S. Huebner Insurance Foundation, 1963.
- Eilers, R.D.** "The Changing Environment for Blue Shield." *Medical Care* 6 (January/February 1968):55-68.
- ***Eisenberg, B.S.** "Information Exchange Among Competitors: The Issue of Relative Value Scales for Physicians' Services." *The Journal of Law and Economics* 23 (October 1980):441-460.
- Eisenberg, J.M. and Rosoff, A.J.** "Physician Responsibility for the Cost of Unnecessary Medical Services." *New England Journal of Medicine* 299 (July 13, 1978):76-80.
- Eisenstadt, D. and Arnould, R.J.** "The Effects of Medical Society Control of Blue Shield on Fees in the Physician Service Market: Some Preliminary Evidence." Paper presented at Eastern Economic Association, May 1979, Boston, Massachusetts.
- ***Eisenstat, D. and Kennedy, T.E.** "Control and Behavior of Nonprofit Firms: The Case of Blue Shield." *Southern Economic Journal* 48 (July 1981):26-36.
- ***Ellwood, P.M.** "Alternatives to Regulation: Improving the Market." In *Controls on Health Care*. Washington, D.C.: National Academy of Sciences, 1975.
- Ellwood, P.M. and McClure, W.** *Health Delivery Reform*. Excelsior, Minnesota: InterStudy, 1976.
- Engel, G.** "The Effect of Bureaucracy on the Professional Autonomy of the Physician." *Journal of Health and Social Behavior* 10 (March 1969):30-41.
- Enthoven, A.C.** *Memorandum for Secretary Califano on National Health Insurance*. September 22, 1977.
- Enthoven, A.C.** "The Consumer Choice Approach to National Health Insurance: Equity, the Marketplace, and the Legitimacy of the Decision-Making Process." In *Effects of the Payment Mechanism on the Health Care Delivery System*. DHEW Publication No. (PHS)78-3227 Washington, D.C.: Department of Health, Education, and Welfare, 1978.
- ***Enthoven, A.C.** "Consumer-Choice Health Plan." *New England Journal of Medicine* 298 (March 23 and March 30, 1978):650-658 (Part 1) and 709-720 (Part 2).
- Enthoven, A.C.** "Cutting Cost Without Cutting the Quality of Care." *New England Journal of Medicine* 298 (1978):1229-1238.
- ***Enthoven, A.C.** "Consumer-Centered vs. Job-Centered Health Insurance." *Harvard Business Review* 57 (January/February 1979):141-152.
- Enthoven, A.C.** "Competition of Alternative Health Care Delivery Systems." In *Competition in the Health Care Sector: Past, Present and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1979.
- Enthoven, A.C.** "Health Care Cost Containment Through Incentives and Competition: Consumer Choice Health Plan." In *Socioeconomic Issues of Health*. Chicago, Illinois: American Medical Association, 1979.
- Enthoven, A.C.** "Does Anyone Want Competition? The Politics of NHI." In *New Directions in Public Health Care: A Presentation for the 1980s*, edited by Cotton M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1980.
- ***Enthoven, A.C.** *Health Plan: The Only Practical Solution to the Soaring Cost of Medical Care*. Reading, Massachusetts: Addison-Wesley Publishing Co., 1980.
- Enthoven, A.C.** "Note on Paul Eggers' December 1979 Paper on GHC Puget Sound Risk Differential." Hearings before Committee on Finance, United States Senate, Washington, D.C., March 18, 1980.
- Enthoven, A.C.** "How Interested Groups Have Responded to a Proposal for Economic Competition in Health Services." *American Economic Review* 70 (May 1980):142.
- Enthoven, A.C.** "The Competition Strategy: Status and Prospects." *New England Journal of Medicine* 304 (January 8, 1981):109-112.
- ***Enthoven, A.C.** *Design for Comprehensive Reform of Medicare*. Memorandum to Assistant Secretary Robert Rubin, M.D., July 1, 1981.
- ***Enthoven, A.C.** "Supply Side Economics of Health Care and Consumer Choice Health Plan." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

- Enthoven, A.C.** "The Behavior of Health Care Agents: Provider Behavior." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.
- Enthoven, A.C. and Noll, R.G.** "Regulatory and Non-regulatory Strategies for Controlling Health Care Costs." In *Medical Technology: The Culprit Behind Health Care Costs?*. DHEW Publication No. (PHS) 79-3216. Washington, D.C.: Department of Health, Education, and Welfare, 1979.
- Etzioni, A. and Doty, P.** "Profit in Not-For-Profit Corporations: The Example of Health Care." *Political Science Quarterly* 91 (Fall 1976):433-453.
- *Evans, F.O. Jr.** "Physician-Based Group Insurance: A Proposal for Medical Cost Control." *New England Journal of Medicine* 302 (June 5, 1980):1280-1283.
- Evans, R.G.** *Price Formation in the Market for Physician Services in Canada 1957-1969*. Ottawa: the Queen's Printer, 1973.
- *Evans, R.G.** "Supplier-Induced Demand: Some Empirical Evidence and Implications." In *The Economics of Health and Medical Care*, edited by M. Perlman. London: MacMillan and Co., 1974.
- Evans, R.G.** "Beyond the Medical Marketplace: Expenditure, Utilization, and Pricing of Insured Health Care in Canada." In *The Role of Health Insurance in the Health Services Sector*, edited by R.N. Rosett. New York: National Bureau of Economic Research, 1976.
- Evans, R.G.** "Professionals and the Production Function: Can Competition Policy Improve Efficiency in the Licensed Professions?" In *Occupation Regulation*, edited by S. Rottenberg. Washington, D.C.: American Enterprise Institute, 1979.
- Evans, R.G.** "Incomplete Vertical Integration: The Distinctive Structure of the Health Care Industry." In *Health, Economics and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.
- Evans, R.G. and Walker, H.D.** "Economic Issues in the Provision of Health Services." In *Canadian Economic Problems and Policies*, edited by L.H. Officer and L.B. Smith. Toronto: McGraw-Hill, 1970.
- Evans, R.G. and Williamson, M.F.** *Extending Canadian National Health Insurance: Options for Pharmacare and Denticare*. Toronto: University of Toronto Press, 1978.
- Evans, R.G. et al.** "Medical Production, Scale Effects, and Demand Generation." *Canadian Journal of Economics* 6 (August 1973):376-393.
- Evans, R.G. et al.** *Controlling Health Care Costs by Direct Charges to Patients: Snare or Delusion?* Toronto: Ontario Economic Council, 1979.
- Fanara, P. and Greenberg, W.** "The Impact of Competition on Blue Cross Risk Selection." Paper presented at American Economic Association Meeting, December 1981, Washington, D.C.
- Farley, Pamela J. and Wilensky, Gail R.** "Options, Incentives, and Employment-Related Health Insurance Coverage" in *Advances in Health Economics and Health Services Research, Vol IV*. Greenwich, CT: JAI Press, 1983.
- Feder, J. et al.** *Insuring the Nation's Health: Market Competition, Catastrophe and Competitive Approaches*. Washington, D.C.: The Urban Institute, 1981.
- Feder, J. and Scanlon, W.** "Intentions and Consequences of Regulating the Nursing Home Bed Supply." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Winter 1980):54-88.
- Feder, J. and Scanlon, W.** "Medicare and Medicaid Patients' Access to Skilled Nursing Facilities." Working Paper No. 1438-02, November 1981, The Urban Institute, Washington, D.C.
- Feldman, R.** "Price and Quality Differences in the Physicians' Services Market." *Southern Economic Journal* 45 (January 1979):885-891.
- *Feldman, R. and Begun, J.W.** "The Effects of Advertising Restrictions: Lessons from Optometry." *Journal of Human Resources* 13 (Supplement 1978):247-262.
- Feldman, R. and Begun, J.W.** "Does Advertising of Prices Reduce the Mean and Variance of Prices?" *Economic Inquiry* 18 (July 1980):479-484.
- *Feldman, R. and Greenberg, W.** "Blue Cross Market Share, Economies of Scale, and Cost Containment Efforts." *Health Services Research* 16 (Summer 1981):175-183.
- Feldman, R. and Greenberg, W.** "The Relation Between the Blue Cross Market Share and the Blue Cross 'Discount' on Hospital Charges." *Journal of Risk and Insurance*, forthcoming.
- Feldman, R. and Scheffler, R.** "The Supply of Medical School Applicants and the Rate of Return to Training." *Quarterly Review of Economics and Business* 18 (1978):91-98.
- Feldman, P. and Zeckhauser, R.** "Some Sober Thoughts on Health Care Regulation." In *Regulating American Business*, edited by Paul MacAvoy. San Francisco, California: Institute for Contemporary Studies, 1978.

- Feldman, R. et al.** "Compensation Arrangements Between Hospitals and Physicians." *Bell Journal of Economics* 12 (Spring 1981):155-170.
- ***Feldstein, M.S.** "The Rising Price of Physicians' Services." *Review of Economics and Statistics* 52 (May 1970):121-133.
- ***Feldstein, M.S.** "A New Approach to National Health Insurance." *The Public Interest* 23 (Spring 1971):93-105.
- ***Feldstein, M.S.** "Hospital Cost Inflation: A Study of Nonprofit Price Dynamics." *The American Economic Review* 61 (December 1971):853-872.
- ***Feldstein, M.S.** "The Rising Cost of Hospital Care." Washington, D.C.: Information Resources Press, 1971.
- ***Feldstein, M.S.** "The Welfare Loss of Excess Health Insurance." *Journal of Political Economy* 81 (March/April 1973):251-280.
- Feldstein, M.S.** "Econometric Studies of Health Economics." In *Frontiers of Quantitative Economics II*, edited by M. Intriligator and D. Kendrick. Amsterdam: North-Holland Publishing Co., 1975.
- Feldstein, M.S.** "Quality Change and the Demand for Medical Care." *Econometrica* 45 (1977):1681-1702.
- ***Feldstein, M.S. and Friedman, B.** "Tax Subsidies, the Rational Demand for Insurance, and the Health Care Crisis." *Journal of Public Economics* 7 (1977):155-178.
- Feldstein, M.S. and Taylor, A.** *The Rapid Rise of Hospital Costs*. Washington, D.C.: U.S. Government Printing Office, January 1977.
- Feldstein, P.J.** *Prepaid Group Practice: An Analysis and Review*. Ann Arbor, Michigan: School of Public Health, University of Michigan, June 1971.
- ***Feldstein, P.J.** *Health Associations and the Demand for Legislation: The Political Economy of Health*. Cambridge, Massachusetts: Ballinger Publishing Co., 1977.
- Fenninger, R.B. and Meeker, E.F.** "Decade of the 1970s--Window on the 1980s." In *Profile of Medical Practice, 1980*, edited by G.L. Glandon and R.J. Shapiro. Chicago, Illinois: American Medical Association, 1980.
- ***Ferber, B.** "An Analysis of Chain-Operated For-Profit Hospitals." *Health Services Research* 16 (Spring 1971):53-64.
- Fethke, C. and Wu, S.Y.** "A Historical Perspective on the Health Care Industry." *Health Communications and Informatics* 5 (1979):256-286.
- Finkelstein, S.N. and Gilbert, T.J.** "Cost-Behavior of Changing Utilization of a Hospital Chemistry Laboratory." Discussion Paper, January 1980, University Health Policy Consortium, Waltham, Massachusetts.
- Francis, S.R.** "Cautions on Capitation Practice." *New York State Dental Journal* 46 (May 1980):268-270.
- Francisco, E.W.** "Analysis of Cost Variations among Short-Term General Hospitals." In *Empirical Studies in Health Economics*, edited by H. Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.
- ***Fraundorf, K.C.** "Competition In Blood Banking." *Public Policy* 23 (Spring 1975):219-240.
- Fraundorf, K.C.** "Competition and Public Policy in the Nursing Home
- Industry."** *Journal of Economic Issues* 11 (September 1977):601-634.
- Frech, H.E. III.** "Optimal Scale in Medical Practice: A Survivor Analysis." *Journal of Business* 47 (January 1974):23-36.
- Frech, H.E. III.** "Occupational Licensure and Health Care Productivity: The Issues and the Literature." In *Health Manpower and Productivity: The Literature and Required Future Research*, edited by J. Rafferty. Lexington, Massachusetts: Lexington Books, 1974.
- Frech, H.E. III.** "The Regulation of Health Insurance." Ph.D. dissertation, University of California, Los Angeles, 1974.
- ***Frech, H.E. III.** "The Property Rights Theory of the Firm: Empirical Results from a Natural Experiment." *Journal of Political Economy* 84 (February 1976):143-152.
- Frech, H.E. III.** "The Demand for Health Insurance; Comment." In *The Role of Health Insurance in the Health Services Sector*, edited by R.N. Rosett. New York: National Bureau of Economic Research, 1976.
- ***Frech, H.E. III.** "Market Power in Health Insurance: Effects on Insurance and Medical Markets." *Journal of Industrial Economics* 28 (September 1979):55-72.
- ***Frech, H.E. III.** "Blue Cross, Blue Shield, and Health Care Costs: A Review of the Economic Evidence." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.
- Frech, H.E. III.** "Health Insurance: Private, Mutual or Government." *Research in Law and Economics* (Supplement 1) (1980):61-73.
- Frech, H.E. III.** "Competition in Health Care: The Potential of Antitrust Policy." In *Conference Course Book: Fourth Annual Program on Antitrust in the Health Care Field*. Washington, D.C.: National Health Lawyers Association, 1981.

- Frech, H.E. III.** "The Long-Lost Free Market in Health Care: Government Regulation of Medicine." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.
- Frech, H.E. III and Ginsburg, P.B.** "Physician Pricing: Monopolistic or Competitive?" *Southern Economic Journal* 39 (April 1972):573-577.
- *Frech, H.E. III and Ginsburg, P.B.** "Imposed Health Insurance in Monopolistic Markets: A Theoretical Analysis." *Economic Inquiry* 13 (March 1975):55-70.
- Frech, H.E. III and Ginsburg, P.B.** *Private Health Insurance in Public Markets*. Washington, D.C.: American Enterprise Institute, 1978.
- Frech, H.E. III and Ginsburg, P.B.** "Competition Among Health Insurers." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1979.
- *Frech, H.E. III and Ginsburg, P.B.** "The Cost of Nursing Home Care in the United States: Government Financing, Ownership and Efficiency." In *Health, Economics and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.
- Frech, H.E. III and Ginsburg, P.B.** "Property Rights and Competition in Health Insurance: Multiple Objectives for Nonprofit Firms." *Research in Law and Economics*, in press.
- Freeborn, D.K. et al.** "Determinants of Medical Care Utilization: Physicians' Use of Laboratory Services." *American Journal of Public Health* 62 (June 1972):846-853.
- Freeborn, D.K. et al.** "Health Status, Socioeconomic Status, and Utilization of Outpatient Services for Members of a Prepaid Group Practice." *Medical Care* 15 (February 1977):115-128.
- Friedman, B.** "Rationales for Government Initiative in Catastrophic Health Insurance." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.
- Friedman, B. et al.** *Hospital Participation in Competitive Markets for Ambulatory Care: Implications for Reimbursement Policy*. Evanston, Illinois: Center for Health Services and Policy Research, Northwestern University, December 1981.
- Friedman, E.** "Does Market Competition Belong In Health Care?" *Hospitals* 54 (July 1, 1980):47-50.
- Friedman, E.** "Competition and the Changing Face of Health Care." *Hospitals* 54 (July 16, 1980):64-67.
- Freidson, E.** "Client Control and Medical Practice." *American Journal of Sociology* 65 (January 1960):374-382.
- Freidson, E.** "Prepaid Group Practice and the New Demanding Patient." *Milbank Memorial Fund Quarterly/Health and Society* 51 (Fall 1973):473-488.
- Freidson, E.** *Doctoring Together: A Study of Professional Social Control*. New York: Elsevier, 1975.
- Froehlike, R.F.** "Promising Approaches to Cost Containment: The Health Insurance View." *Bulletin of the New York Academy of Medicine* 56 (1980):152-156.
- Fruen, M. et al.** "Effects of Financial Incentives on Physicians' Specialty and Location Decisions." *Health Policy and Education* 1 (1980):143-159.
- Fuchs, V.R.** *Who Shall Live?* New York: Basic Books, Inc., 1974.
- *Fuchs, V.R.** "The Supply of Surgeons and the Demand for Operations." *Journal of Human Resources* 13 (Supplement 1978):35-56.
- Fuchs, V.R.** "Sounding Board: The Coming Challenge to American Physicians." *New England Journal of Medicine* 304 (1981):1487-1490.
- *Fuchs, V.R., and Kramer, M.J.** *Determinants of Expenditures for Physicians' Services in the United States 1948-1968*. New York: National Bureau of Economic Research, 1972.
- Fuchs, V.R. and Newhouse, J.P.** "National Bureau of Economic Research Conference on the Economics of Physician and Patient Behavior: The Conference and Unresolved Problems." *Journal of Human Resources* 13 (Supplement 1978):5-18.
- Fulchiaro, A. et al.** "Can the PSROs be Cost Effective?" *New England Journal of Medicine* 299 (1978):577-580.
- *Fuller, N.A. et al.** "Medicaid Utilization of Services in a Prepaid Group Practice Health Plan." *Medical Care* 15 (September 1977):705-737.
- *Gabel, J.R. and Redisch, M.A.** "Alternative Physician Payment Methods: Incentives, Efficiency and National Health Insurance." *Milbank Memorial Fund Quarterly/Health and Society* 57 (Winter 1979):38-59.
- Gaffney, J.C. et al.** "Competitive Forces in the Market for Physicians' Services: A Survey of Current Research." In *Profile of Medical Practice, 1981*, edited by D.L. Goldfarb. Chicago, Illinois: American Medical Association, 1981.
- Gagnon, J.P. and Jans, R.** *Federal Control of Pharmaceutical Costs: The MAC Experience*. New York: Health Issues, 1979.

- Gagnon, J.P. and Rodowskas, C.A.** "A Study of the Relationships of Drug Dosage Form, Therapeutic Class and Pharmaceutical Services with the Gross Margins on Prescription Drugs." *Medical Care* 12 (January 1974):49-61.
- Galiher, C.B. and Costa, M.A.** "A Consumer Acceptance of HMOs." *Public Health Reports* 90 (March/April 1975):106-112.
- Garbarino, J.W.** *Health Plans and Collective Bargaining*. Berkeley, California: University of California Press, 1960.
- Garfield, S.R.** "The Delivery of Medical Care." *Scientific American* 222 (April 1970):15-23.
- Garner, D.P. et al.** "Factors Affecting Physician Participation in a Medicaid Program." *Medical Care* 18 (January 1979):43-58.
- Gartside, F.E.** "The Medi-Cal Cutbacks in 1967 Revisited." *Medical Care* 9 (January-February 1971):7-16.
- Gartside, F.E. et al.** *Medical Services in California Under Different Organizational Modes*. Los Angeles, California: School of Public Health, University of California at Los Angeles, December, 1973.
- Gaus, C.R.** "Who Enrolls in a Prepaid Group Practice: The Columbia Experience." *Johns Hopkins Medical Journal* 128 (January 1971):9-14.
- Gaus, C.R. et al.** "Contrasts in HMO and Fee-for-Service Performance." *Social Security Bulletin* 39 (May 1976):3-14.
- Gelman, J.R.** "Competition and Health Planning." Washington, D.C.: Federal Trade Commission, Bureau of Economics, April 1982.
- Gerst, A. et al.** "Patterns of Satisfaction with Health Plan Coverage: A Conceptual Approach." *Inquiry* 6 (September 1969):37-51.
- *Gertman, P.H.** "Physicians as Guiders of Health Services Use." In *Consumer Incentives for Health Care*, edited by S.J. Mushkin. New York: Prodist, 1974.
- Geyman, J.P.** "Future Medical Practice in the U.S.: Choice of Scenarios." *Journal of the American Medical Association* 245 (March 20, 1981):1140-1143.
- Gifford, J.F. Jr. and Anlyan, W.G.** "Sounding Board: The Role of the Private Sector in an Economy of Limited Health Care Resources." *New England Journal of Medicine* 300 (April 5, 1979):790-793.
- Ginsburg, P.** "Resource Allocation in the Hospital Industry: The Role of Capital Financing." *Social Security Bulletin* 35 (October 1972):20-30.
- Ginsburg, P.B.** "Impact of the Economic Stabilization Program on Hospitals: An Analysis With Aggregate Data." In *Hospital Cost Containment: Selected notes for Future Policy*, edited by M. Zubkoff et al. New York: Prodist, 1978.
- Ginsburg, P.B.** "Medicare Vouchers and the Procompetition Strategy." *Health Affairs* 1 (Winter 1981):39-52.
- *Ginsburg, P.B.** "Altering the Tax Treatment of Employment-Based Health Plans." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):224-255.
- *Ginsburg, P.B.** *An Analysis of the National Health Care Reform Act 1981 (H.R. 850)*. Congressional Budget Office, The Congress of the United States, September 30, 1981.
- Ginsburg, P.B. and Manheim, L.M.** "Insurance, Copayment, and Health Services Utilization: A Critical Review." *Journal of Economics and Business* (Spring-Summer 1973):142-152.
- *Ginzberg, E.** "The Competitive Solution: Two Views: Competition and Cost Containment." *New England Journal of Medicine* 303 (November 6, 1980):1112-1115.
- Ginzberg, E.** "Economic Changes and Physician-Patient Relations." *Bulletin of the New York Academy of Medicine* 57 (January-February 1981):29-35.
- Glaser, W.A.** *Paying the Doctor: Systems of Remuneration and Their Effects*. Baltimore, Maryland: John Hopkins Press, 1970.
- *Goldberg, L.G. and Greenberg, W.** "The Effect of Physician- Controlled Health Insurance." *Journal of Health Politics, Policy and Law* 2 (Spring 1977):48-78.
- Goldberg, L.G. and Greenberg, W.** *The Health Maintenance Organization and Its Effects on Competition*. Washington, D.C.: Federal Trade Commission, 1977.
- Goldberg, L.G. and Greenberg, W.** "The Competitive Response of Blue Cross and Blue Shield to the Health Maintenance Organization in Northern California and Hawaii." *Medical Care* 17 (October 1979):1019-1028.
- Goldberg, L.G. and Greenberg, W.** "The Emergence of Physician- Sponsored Health Insurance: A Historical Perspective." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.
- *Goldberg, L.G. and Greenberg, W.** "The Competitive Response of Blue Cross to Health Maintenance Organizations." *Economic Inquiry* 18 (January 1980):55-68.

- ***Goldberg, L.G. and Greenberg, W.** "The Determinants of HMO Enrollment and Growth." *Health Services Research* 16 (Winter 1981):421-438.
- ***Goldberg, S.A. and Greenberg, W.** "Third Party Cost Containment and the Physician-Patient Relationship: A Case Study." *Journal of Community Health* (Winter 1981).
- Goldfarb, M. et al.** "Behavior of the Multiproduct Firm: A Model of the Non-Profit Hospital System." *Medical Care* 18 (February 1980):185-201.
- Goldman, F. and Grossman, M.** "The Demand for Pediatric Care: An Hedonic Approach." *Journal of Political Economy* 86 (1978):259-280.
- Goldstein, G. and Pauly, M.V.** "Group Health Insurance As a Local Public Good." In *The Role of Health Insurance in the Health Services Sector*, edited by R. Rosett. New York: National Bureau of Economic Research, 1976.
- Gornick, M.** "Medicare Patients: Geographic Differences in Hospital Discharge Rates and Multiple Stays." *Social Security Bulletin* 40 (June 1977):22-41.
- Gottlieb, S.R.** "A Brief History of Health Planning in the United States." In *Regulating Health Facilities Construction*, edited by Clark C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.
- Grabowski, H.** "Public Policy and Innovation: The Case of Pharmaceuticals." *Technovation* 1 (1982):157-189.
- ***Green, J.** "Welfare Losses from Monopoly in the Drug Industry: The Oklahoma Antisubstitution Law." *Antitrust Law and Economic Review* 5 (Spring 1972):97-119.
- Greenberg, I.G. and Rodburg, M.L.** "The Role of Prepaid Group Practice in Relieving the Medical Care Crisis." *Harvard Law Review* 84 (February 1971):887-945.
- Greenberg, W.** "Alternatives to Regulation in the Health Care Sector." *Special Study on Economic Change, Vol. 5*. Washington, D.C.: Joint Economic Committee, Congress of the United States, December 1980.
- Greenberg, W.** *National Health Issues: A Perspective on Cost Containment*. Hoffmann-LaRoche, 1981.
- ***Greenberg, W.** "Provider-Influenced Insurance Plans and Their Impact on Competition: Lessons from Dentistry." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.
- Greenlick, M.R. et al.** "Comparing the Use of Medical Care Services by a Medically Indigent and a General Membership Population in a Comprehensive Prepaid Group Practice." *Medical Care* 10 (May/June 1972):187-200.
- ***Greenspan, N.T. and Vogel, R.J.** "Taxation and Its Effects on Public and Private Health Insurance and Medical Demand." *Health Care Financing Review* 1 (Spring 1980):39-43.
- Greenspan, N.T. and Vogel, R.J.** "An Econometric Analysis of the Effects of Regulation in the Private Health Insurance Market." *Journal of Risk and Insurance*, in press.
- Grossman, S. and Stiglitz, J.** "Information and Competitive Price Systems." *American Economic Review* 66 (May 1976):246-253.
- Gunnell, D.R.** "The Mechanics of Cost Containment: An Administrative Point of View." *Hospital Materials Management Quarterly* 1 (1980):1-9.
- Guzick, D.S. and Jahiel, R.I.** "Distribution of Private Practice Offices of Physicians with Specified Characteristics Among Urban Neighborhoods." *Medical Care* 14 (June 1976):469-488.
- Hadley, J. and Lee, R.** "Physicians' Price and Output Decisions: Theory and Evidence." Working Paper 998-8, April 1978, The Urban Institute, Washington D.C.
- Hadley, J. et al.** "Can Fee-for-Service Reimbursement Coexist With Demand Creation?" *Inquiry* 16 (Fall 1979):247-258.
- Hales, W.D.** "An Analysis of the Effects of Competitive Markets on Hospital Costs in Oklahoma." Ph.D. dissertation, Oklahoma State University, 1974.
- ***Hall, T.D. and Lindsay, C.M.** "Medical Schools: Producers of What? Sellers of Whom?" *Journal of Law and Economics* 23 (April 1980):55-80.
- Hammons, P. and Jamison, H.** "Expanded Functions for Dental Auxiliaries." *Journal of the American Dental Association* 75 (September 1967):658-672.
- Handler, E.** "Working the Limits--An Exploratory Study of Massachusetts Hospitals Caught by Section 223." Discussion Paper, June 1981, University Health Policy Consortium, Waltham, Massachusetts.
- Harrelson, E.F. and Donovan, K.M.** "Consumer Responsibility in a Prepaid Group Health Plan." *American Journal of Public Health* 65 (October 1975):1077-1086.
- ***Harris, J.E.** "The Internal Organization of Hospitals: Some Economic Implications." *Bell Journal of Economics* 8 (1977):467-482.
- ***Harris, J.E.** "Pricing Rules for Hospitals." *Bell Journal of Economics* (Spring 1979):224-243.

Harris, J.E. "Regulation and Internal Control in Hospitals." *Bulletin of the New York Academy of Medicine* 55 (January 1979):88-103.

Harris, J.E. "The Aggregate Coinsurance Rate and the Supply of Innovations in the Hospital Sector." Cambridge, Massachusetts: Department of Economics, Massachusetts Institute of Technology, July 1979.

Louis Harris and Associates. *American Attitudes Toward Health Maintenance Organizations: A Survey of the Public, HMO Members, and Potential Members Nationwide*. New York, 1980.

*Havighurst, C.C. "Health Maintenance Organizations and the Market for Health Services." *Law and Contemporary Problems* 35 (1970):716-795.

Havighurst, C.C. "More on Regulation: A Reply to Stephen Weiner." *American Journal of Law and Medicine* 4 (1973):243-253.

*Havighurst, C.C. "Regulation of Health Facilities and Services by 'Certificate of Need'." *Virginia Law Review* 59 (October 1973):1143-1232.

Havighurst, C.C. ed. *Regulating Health Facilities Construction*. Washington, D.C.: American Enterprise Institute, 1974.

Havighurst, C.C. "Testimony in U.S. Congress, Senate Subcommittee on Antitrust and Monopoly, of the Committee on the Judiciary, Hearings." *Competition in the Health Services Market, Pts. 1-3*. 2nd Session, 93rd Congress, May 14, 15, 17, 29, 30; July 10, 1974.

*Havighurst, C.C. "Federal Regulation of the Health Care Delivery System." *University of Toledo Law Review* 6 (Spring 1975):577-590.

Havighurst, C.C. "Controlling Health Care Costs: Strengthening the Private Sector's Hand." *Journal of Health Politics, Policy and Law* 4 (Winter 1977):471-498.

*Havighurst, C.C. "Professional Restraints on Innovation in Health Care Financing." *Duke Law Journal* (May 1978):303-387.

*Havighurst, C.C. "Health Insurers and Health Care Costs: Can the Problem Be Part of the Solution?" *Health Communications and Informatics* 5 (1979):319-338.

Havighurst, C.C. "Private Cost Containment--Medical Practice Under Competition." In *Socioeconomic Issues of Health*, edited by G. Misek. Chicago, Illinois: American Medical Association, 1979.

Havighurst, C.C. "The Antitrust Laws, the Federal Trade Commission, and Cost Containment." *Bulletin of the New York Academy of Medicine* 56 (1980):169-179.

*Havighurst, C.C. "Prospects for Competition Under Health Planning-cum- Regulation." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

Havighurst, C.C. "Competition in Health Services: Overview, Issues and Answers." *Vanderbilt Law Review* 34 (1981):1117-1158.

Havighurst, C.C. "Health Planning for Deregulations Implementing the 1979 Amendments." *Law and Contemporary Problems* 44 (1981):33-76.

Havighurst, C.C. *Deregulating the Health Care Industry: Planning for Competition*. Cambridge, Massachusetts: Ballinger Publishing Co., forthcoming.

*Havighurst, C.C. and Hackbarth, G.M. "Private Cost Containment." *The New England Journal of Medicine* 9 (June 7, 1979):1298-1305.

Havighurst, C.C. and Hackbarth, G.M. "Enforcing the Rules of Free Enterprise in an Imperfect Market: The Case of Individual Practice Associations." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

*Havighurst, C.C. and Kissam, P.C. "The Antitrust Implications of Relative Values Studies In Medicine." *Journal of Health Politics, Policy and Law* 4 (1979):48-86.

Health Insurance Association of America. *Competition in the Health Care System, An Evaluation of the Pro-Competition Bills*. Washington, D.C.: Health Insurance Association of America, 1981.

Held, P.J. and Manheim, L.M. "The Effect of Local Physician Supply on the Treatment of Hypertension in Quebec." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

Held, P.J. and Pauly, M.V. *An Economic Analysis of the Production and Cost of Renal Dialysis Treatments*. Evanston, Illinois, Center for Health Services and Policy Research, Northwestern University, June 1980.

Held, P.J. and Pauly, M.V. "Charging the Victim: An Evaluation of Reimbursement Policy in the U.S. End-Stage Renal Disease Program." Working Paper No. 32, December 1980, The Urban Institute, Washington, D.C.

Held, P.J. and Reinhardt, U. "Prepaid Medical Practice: A Summary of Findings From a Recent Survey of Group Practices in the United States--A Comparison of Fee-for-Service and Prepaid Group Practice." *Group Health Journal* 1 (Summer 1980):4-15.

Helgerson, S.D. "Control of Practice and the Medical Service Bureaus of King and Pierce Counties 1900-1933." Master's thesis, University of Washington, 1971.

Hellinger, F.J. "The Effect of Certificate-of-Need Legislation on Hospital Investment." *Inquiry* 13 (June 1976):187-193.

***Hellinger, F.J.** "An Empirical Analysis of Several Prospective Reimbursement Systems." In *Hospital Cost Containment: Selected Notes for Future Policy*, edited by M. Zutkoff et al. New York: Prodist (1978):390-400.

Helms, J. et al. "Copayments and Demand for Medical Care: The California Medicare Experience." *Bell Journal of Economics* 9 (Spring 1978):192-208.

***Helms, R.B.** "Contemporary Health Policy: Dealing With the Cost of Care." In *Contemporary Economic Problems*, edited by W. Fellner. Washington, D.C.: The American Enterprise Institute, 1978.

***Hester, J. and Sussman, E.** "Medicaid Prepayment: Concept and Implementation." *Milbank Memorial Fund Quarterly/Health and Society* 52 (Fall 1974):415-444.

***Hetherington, R.W. et al.** *Health Insurance Plans: Promise Performance*. New York: John Wiley and Sons, 1975.

Hiatt, H. "Protecting the Medical Commons." *The New England Journal of Medicine* 293 (July 1975): 235-240.

Hixon, J.S. and Mocniak, N. "The Aggregate Supplies and Demands of Physicians and Dental Services." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW, Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education and Welfare, 1980.

Hixon, J.S. and Worthington, P.N. "An Administered Price System For Hospitals." *Social Science and Medicine* 11 (1977):801-807.

Holahan, J. "Physician Availability, Medical Care Reimbursement and Delivery of Physician Services: Some Evidence from the Medicaid Program." *Journal of Human Resources* 10 (Summer 1975):378-402.

Holahan, J. *Physician Reimbursement Under National Health Insurance*. Washington, D.C.: The Urban Institute, 1977.

***Holahan, J.** "Foundations for Medical Care: An Empirical Investigation of the Delivery of Health Services to a Medicaid Population." *Inquiry* 14 (December 1977):352-368.

Holahan, J. et al. "Physician Pricing In California: Executive Summary." Working Paper 998010, April 1978, The Urban Institute, Washington, D.C.

***Holahan, J. et al.** "The Effects of Medicare/Medicaid Reimbursement on Physician Behavior: A Summary of Findings." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

***Holahan, J. and Feder, J.** "Medicaid and Capitation Payments to Physicians." Working Paper No. 1298-3, March 1981, The Urban Institute, Washington, D.C.

Holzgraefe, J.R. "Controlling Health Care Costs Through Commercial Insurance Companies." *Duke Law Journal* 2 (May 1978):728-752.

Hornbrook, M.C. "Market Domination and Promotional Intensity in the Wholesale Retail Sector of the U.S. Pharmaceutical Industry." *Abstracts of Hospital Management Studies* 13 (1977):1-263.

***Hornbrook, M.C.** "Market Structure and Advertising in the U.S. Pharmaceutical Industry." *Medical Care* 16 (February 1978):90-109.

Hospital Association of New York State. *Cost of Regulation*. Albany, New York: Hospital Association of New York State, 1978.

Hough, D.C. and Misek, G.I. eds. *Socioeconomic Issues of Health* 1980. Chicago, Illinois: American Medical Association, Center for Health Services Research and Development, 1980.

House, D.R. "Conflicting Theories of the Determination of the Entrepreneur's Income: An Analysis of the Practicing Dentist." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

***House, D.R.** "A Full-Price Approach to the Dental Market: Implications for Price Determination." *Journal of Health Politics, Policy and Law: Special Section on Dental Policy* 5 (Winter 1981):593-607.

Houthakker, H.S. "Compensated Changes in Quantities and Qualities Consumed." *Review of Economic Studies* 19 (1952):155-164.

Howell, J.R. *Regulating Hospital Capital Investment: The Experience in Massachusetts*. DHHS Publication No. (PHS) 81-3298. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

***Hsiao, W. et al.** "The Patterns of Physician Charges: Implications for Policy." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

Hu, T.W. "The Demand for Dental Care Services, by Income, and Insurance Status." In *Advances on Health Economics and Health Services Research*, edited by R. Schaffer. Greenwich, Connecticut: JAI Press, 1981.

Huang, L.F. and Koropecsky, O. *The Effects of the Medicare Method of Reimbursement on Physicians' Fees and on Beneficiaries' Utilization, Vol. 2, Part 1*. Washington, D.C.: Robert Nathan Associates, 1973.

***Huang, L.F. and Rosett, R.N.** "Redistribution of Income Through Blue Cross Community Related Premiums." Discussion Paper, June 1972, University of Rochester, Rochester, New York.

78 **Hughes, M.L. and Legler, D.W.** "Cost, Benefits, and Management Considerations of a Prepaid Student Dental Health Plan." *Journal of the American College Health Association* 27 (1979):293-296.

***Iglehart, J.K.** "The Federal Government as a Venture Capitalist: How Does It Fare?" *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):656-666.

Iglehart, J.K. "Drawing the Lines for the Debate on Competition." *The New England Journal of Medicine* 305 (July 30, 1981):291-296.

Ingbar, M. "The Consumer's Perspective." In *Hospital Cost Containment: Selected Notes for Future Policy*, edited by M. Zubkoff et al. New York: Prodist, 1978.

Intriligator, M. "Major Policy Issues in the Economics of Health Care in the United States." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

Jacobs, P. "A Survey of Economic Models of Hospitals." *Inquiry* 11 (June 1974):83-97.

Jagger, F.M. et al. "Comparative Evaluation of the Costs, Quality, and System Effects of Ambulatory Surgery Performed in Alternative Settings." Prepared for presentation at the Annual Meeting of the American Public Health Association, October 18, 1978, Los Angeles, California.

James, J.E. and Lowe, R.J. "Reassessing Medical Reimbursement Plans After Changes in the Law and Regulations." *Journal of Taxation* 54 (January 1981):30-7.

Johnson, D.E. "Opponents Challenge Competitor's Ability to Reduce Regs, Lower Costs." *Modern Health Care* 9 (December 1979):12-14.

Johnson, R.E. et al. "Studying the Impact of Patient Drug Profiles in an HMO." *Medical Care* 14 (October 1976):799-807.

Johnson, R.L. "Data Show Non-Profit Hospitals Don't Provide Comparable Service." *Modern Hospital* 116 (April 1971):116.

Jones, E. et al. "HIP Incentive Reimbursement Experiment: Utilization and Costs of Medical Care, 1969 and 1970." *Social Security Bulletin* 37 (December 1974):3-34.

Jones, S.B. "Regulation Under a Consumer Choice Approach to National Health Insurance: The Domino Theory of NHI." In *Effects of the Payment Mechanism on the Health Care Delivery System*. DHEW Publication No. (PHS) 78-3227. Washington, D.C.: Department of Health, Education, and Welfare, 1978.

Jordan, D. "The Role of Pharmaceutical Services in Cost Containment." *Hospital Materials Management Quarterly* 1 (1980):49-61.

Jordan, W.A. "Producer Protection, Prior Market Structure and the Effects of Government Regulation." *Journal of Law and Economics* 15 (April 1972):151-176.

Joseph, H. "On Economic Theories of Hospital Behavior." *Journal of Economics and Business* 27 (Fall 1974):69-74.

Joskow, P.L. "Pricing Decisions of Regulated Firms: A Behavioral Approach." *Bell Journal of Economics and Management Science* 4 (1973):118-140.

***Joskow, P.L.** "The Effects of Competition and Regulation on Hospital Bed Supply and the Reservation Quality of the Hospital." *Bell Journal of Economics* 11 (Autumn 1980):421-447.

Joskow, P.L. *Controlling Hospital Costs: The Role of Government Regulation*. Cambridge, Massachusetts: The MIT Press, 1981.

Joskow, P.L. "Alternative Regulatory Mechanisms for Controlling Hospital Costs." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

***Juba, D.A.** "Price Setting in The Market for Physicians' Services: A Review of the Literature." In *Health Care Financing Administration Grants and Contracts Report*. DHEW Publication No. (HCFA) 030129-79. Washington, D.C.: Department of Health, Education, and Welfare, 1979.

Jurgovan and Blair, Inc. *Health Maintenance Organization Viability*. Rockville, Maryland: Jurgovan and Blair, Inc., March 1979.

Kahn, A.E. *The Economics of Regulation*. New York: John Wiley and Sons, 1970.

- Kane, R.L. and Kane, R.A.** *Alternatives to Institutional Care for the Elderly: Beyond the Dichotomy*. Santa Monica, California: The Rand Corporation, 1979.
- Kaplan, R.S. and Lave, L.B.** "Patient Incentives and Hospital Insurance." *Health Services Research* 6 (Winter 1971):288-300.
- Kaplan, R.S. and Lave, L.B.** "Further Thoughts on Patient Incentives." *Health Services Research* (1972):148-150.
- Kass, D.I. and Pautler, P.A.** *Staff Report on Physician Control of Blue Shield Plans*. Washington, D.C.: Federal Trade Commission, November 1979.
- *Kass, D.I. and Pautler, P.A.** "The Administrative Costs of Non-Profit Health Insurers." *Economic Inquiry* 19 (July 1981):515-521.
- Kass, D.I. and Pautler, P.A.** "FTC Sings the Blues: A Note." *Journal of Health Politics, Policy and Law* 6 (Summer 1981):350-352.
- Kass, D.I. and Pautler, P.A.** "Physician and Medical Society Influence on Blue Shield Plans: Effects on Physician Reimbursement." In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.
- Keeler, E.B. et al.** "Deductibles and the Demand for Medical Care Services: The Theory of a Consumer Facing a Variable Price Schedule Under Uncertainty." *Econometrica* 45 (April 1977):641-655.
- Keeler, E.B. et al.** "The Demand for Supplementary Health Insurance, or Do Deductibles Matter?" *Journal of Political Economy* 85 (August 1977):789-801.
- Kehrer, B.H.** "Factors Affecting the Incomes of Men and Women Physicians: An Exploratory Analysis." *Journal of Human Resources* 11 (Fall 1975):526-545.
- *Kelly, E.J. et al.** "An Examination of the Effect of Market Demographic and Competitive Characteristics on Gross Margins of Prescription Drugs." *Medical Care* 13 (November 1975):956-965.
- Kerr, L.E.** "Desire, Expectation and Reality in a Union Health Program." *New England Journal of Medicine* 278 (May 23, 1968):1149.
- *Kessel, R.** "Price Discrimination in Medicine." *Journal of Law and Economics* 1 (October 1958):20-53.
- Kessel, R.** "The AMA and The Supply of Physicians." *Law and Contemporary Problems* 35 (Spring 1970):267-283.
- Kihlstrom, R. and Pauly, M.V.** "The Role of Insurance in the Allocation of Risk." *American Economic Review* 61 (May 1971):371-379.
- Kimbell, L.J. and Lorant, J.H.** "Production Functions for Physicians' Services." Paper presented at the Econometric Society Meeting, December 1972, Toronto, Canada.
- Kimbell, L.J. and Yett, D.E.** "An Evaluation of Policy-Related Research on the Effects of Alternative Care Reimbursement Systems." Los Angeles, California: Human Resources Research Center, University of Southern California, 1975.
- Kingsdale, J.M.** "Marrying Regulatory and Competitive Approaches to Health Care Cost Containment." *Journal of Health Politics, Policy, and Law* 3 (1978):20-42.
- *Kissam, P.C.** "Physician's Assistant and Nurse Practitioner Laws: A Study of Health Law Reform." *Kansas Law Review* 24 (1976):1-65.
- Kissam, P.C.** "Health Maintenance Organizations, Anticompetitive Behavior and the Role of Antitrust Law and Policy." Paper presented at the Conference on Antitrust Laws and the Health Services Industry, American Enterprise Institute, December 19-20, 1977, Washington, D.C.
- *Kissam, P.C.** "Health Maintenance Organizations and the Role of Antitrust Law." *Duke Law Journal* 1978 (May 1978):487-541.
- *Kissam, P.C.** "Applying Antitrust Law to Medical Credentialing." *American Journal of Law and Medicine* 7 (1981):1-31.
- Kissam, P.C. and Johnson, R.M.** "Health Maintenance Organization and Federal Law: Toward a Theory of Limited Reformmongering." *Vanderbilt Law Review* 29 (October 1976):1163-1232.
- *Kissam, P.C. and Johnson, R.** "State HMO Laws and the Theory of Limited Reformmongering." *Kansas Law Review* 25 (1976):21-62.
- Klarman, H.E.** "Effect of Prepaid Group Practice on Hospital Use." *Public Health Reports* 78 (November 1963):955-965.
- Klarman, H.E.** *The Economics of Health*. New York: Columbia University Press, 1965.
- Klarman, H.E.** "Approaches to Moderating the Increases in Medical Care Costs." *Medical Care* 7 (May/June 1969):175-190.
- Klarman, H.E.** "Economic Research in Group Medicine." In *New Horizons in Health Care*. Proceedings of the First International Congress on Group Medicine, April 26-30, 1970, Winnipeg, Manitoba.
- Klarman, H.E.** "Analysis of the HMO Proposal—Its Assumptions, Implications and Prospects." In *Health Maintenance Organizations: A Reconfiguration of the Health Services System*. Chicago, Illinois: Graduate Program in Hospital Administration, University of Chicago, May 1971.

- Klarman, H.E.** "Health Planning - Progress, Prospects, and Issues." *Milbank Memorial Fund Quarterly/Health and Society* 56 (Winter 1978):78-112.
- Kleinman, J.C. et al.** "Use of Ambulatory Medical Care by the Poor: Another Look at Equity." *Medical Care* 19 (October 1981):1011-1029.
- Klitsner, I.N.** "Affecting Hospital Utilization Patterns." In *How A Group Practice Maintains Its Own Health in a Troubled Economy*, edited by L. Dorsey. Washington, D.C.: Group Health Association of America, Inc., 1976.
- Krinzay, J. and Wilson, A.** *The Patient as Consumer: Health Care Financing in the United States*. Lexington, Massachusetts: D.C. Heath and Company, 1974.
- Kushman, J.E.** "Participation of Private Practice Dentists in Medicaid." *Inquiry* 15 (September 1978):225-233.
- Kushman, J.E.** "Pricing Dental Services: A Market Testing Approach." *Journal of Health Politics, Policy, and Law* 6 (Winter 1981):634-52.
- *Kushman, J.E.** "Denturism As A Tied Goods Problem." Paper presented to the Atlantic Economic Society, London School of Economics, August 1981, London, England.
- *Kushman, J.E. and Scheffler, R.M.** "Pricing Health Services Verification of a Monopoly Pricing Model for Dentistry." *Journal of Human Resources* 12 (Summer 1978):402-413.
- Ladimer, I.** "Consumer Impact on Policy Development: Implications for Prepaid Group Health Agencies." Paper presented at the 105th Annual Meeting of the American Public Health Association, November 1, 1977, Washington, D.C.
- *Landon, J. and Link, C.** "Monopsony and Union Power in the Market for Nurses." *Southern Economic Journal* 41 (April 1975):649-659.
- Landon, J. and Link, C.** "Market Structure, Nonpecuniary Factors, and Professional Salaries: Registered Nurses." *Journal of Economics and Business* 28 (Winter 1976):151-155.
- Langwell, K.M.** "Real Returns to Career Decisions: The Physicians' Specialty and Location Choices." *Journal of Human Resources* 15 (Winter 1980):278-286.
- Langwell, K.M.** "Career Paths of 1968 Resident Physicians: A Seven-Year Study." *Journal of Medical Education* 55 (November 1980):897-905.
- Langwell, K.M.** "Differences by Sex in Economic Returns Associated With Physician Specialization." *Journal of Health Politics, Policy, and Law* 6 (Winter 1982):752-761.
- Langwell, K.M.** "Factors Affecting the Incomes of Men and Women Physicians: Further Explorations." *Journal of Human Resources*, in press.
- Langwell, K.M. and Deane, R.T.** *Hospital Productivity - A Synopsis of the Literature*. DHHS Publication No. (HRA) 80-14028. Washington, D.C.: Department of Health and Human Services, 1980.
- Langwell, K.M. and Werner, J.L.** "Professional Liability Environment and Physicians' Responses: A Regional Examination." *Medical Care* 19 (February 1981):233-242.
- Laubach, G.D.** "Federal Regulation and Pharmaceutical Innovation." In *Regulating Health Care: The Struggle for Control*, edited by A. Levin. Montpelier, Vermont: Capital City Press, 1980.
- Lave, J.R. and Lave, L.B.** "Medical Care and Its Delivery: An Economic Appraisal." *Law and Contemporary Problems* 35 (Spring 1970):252-266.
- Lave, J.R. and Lave, L.B.** "Economic Analysis for Health Service Efficiency: A Review Article." *Applied Economics* 1 (1970):293-305.
- Lave, J.R. and Lave, L.B.** "The Extent of Role Differentiation Among Hospitals." *Health Services Research* 6 (Spring 1971):15-38.
- Lave, J.R. and Lave, L.B.** *The Hospital Construction Act: An Evaluation of the Hill-Burton Program, 1948-1973*. Washington, D.C.: American Enterprise Institute, 1974.
- Lave, J.R. and Lave, L.B.** "Hospital Reimbursement Under National Health Insurance." *Health Communications Informatics* 5 (1979):304-318.
- Lave, J.R. et al.** "An Analysis of the Demand for Emergency Ambulance Service in an Urban Area." *American Journal of Public Health* 61 (June 1971):1156-1169.
- Lave, J.R. et al.** "The Physician's Assistant - Exploration of the Concept." *Hospitals* 45 (June 1971):42-51.
- Lave, J.R. et al.** "The Efficacy of a Comprehensive Health Care Project: An Empirical Analysis." *American Journal of Public Health* 62 (July 1972):924-930.
- Lave, J.R. et al.** "Sources and Uses of Paramedical Personnel." In *Incentives and Planning in Social Policy*, edited by B. Stein and S. Miller. Chicago, Illinois: Aldine, 1973.
- Lave, J.R. et al.** "Modeling the Delivery of Medical Services." In *The Economics of Health and Medical Care*, edited by M. Perlman. New York: Macmillan and Co., 1974.
- Lave, J.R. et al.** "Characteristics of Individuals Who Identify A Regular Source of Medical Care." *American Journal of Public Health* 69 (March 1979):261-267.

- Lave, L.B.** "Incentives Affecting Use of Emergency and Other Acute Medical Services." In *Consumer Incentives for Health Care*, edited by S.J. Mushin. New York: Milbank Memorial Fund, 1974.
- Lave, L.B.** "The Effect of Medical Care Inflation on Consumers." In *Health: A Victim or Cause of Inflation*, edited by M. Zubkoff. New York: Milbank Memorial Fund, 1978.
- Law, S.** *Blue Cross: What Went Wrong?* New Haven: Yale University Press, 1974.
- Lee, E.K. et al.** "Provider Opposition to Prepaid Group Practice and the Capture Argument Against Regulation: A Further Report on the 1979 Survey of PGPs." Paper prepared for the Annual Meeting of the American Public Health Association, November 1979, New York.
- Lee, M.L.** "A Conspicuous Production Theory of Hospital Behavior." *Southern Economic Journal* 38 (July 1971):48-58.
- Lee, R. and Hadley, J.** "Physicians' Fees and Public Medical Care Programs." *Health Services Research* 15 (Summer 1981):204.
- *Leffler, K.B.** "Physician Licensure: Competition and Monopoly in American Medicine." *Journal of Law and Economics* 22 (April 1978):165-186.
- Leffler, K.B. and Lindsay, C.M.** "How Do Human Capital Investors Form Earnings Expectations?" *Southern Economic Journal* 46 (October 1979):591-602.
- *Leffler, K.B. and Lindsay, C.M.** "Markets for Medical Care and Medical Education: An Integrated Long-Run Structured Approach." *Journal of Human Resources* 16 (Winter 1981):20-40.
- Leffler, K.B. and Lindsay, C.M.** "Students Discount Rates, Consumption Loans, and Subsidies to Professional Education." *Journal of Human Resources*, in press.
- Leland, H.E.** "Quality Choice and Competition." *American Economic Review* 67 (March 1977):127-137.
- Leveson, I.** "Policy Coordination and the Choice of Policy Mix." In *Hospital Cost Containment: Selected Notes for Future Policy*, edited by M. I. Zubkoff, et al. New York: Prodist, 1978.
- Levin, A., ed.** *Regulating Health Care*. Montpelier, Vermont: Capital City Press, 1980.
- Lewin and Associates, Inc.** *Promoting Competition as a Regulatory Strategy*. Prepared for the Alpha Center for Health Planning, Bethesda, Maryland, June 1980.
- Lewin and Associates, Inc.** *Competition Among Health Practitioners: The Influence of the Medical Profession on the Health Manpower Market*. Washington, D.C.: Federal Trade Commission, February 1981.
- Lewin and Associates, Inc.** "Competition Among Health Practitioners: The Influence of the Medical Profession on the Health Manpower Market." Paper prepared for the Federal Trade Commission, Washington, D.C., February 1981.
- Lewin, L.S.** "Promising Approaches to Cost Containment: A Conceptual Framework." *Bulletin of the New York Academy of Medicine* 56 (1980):145-151.
- Lewit, E.M. et al.** "A Comparison of Surgical Assisting in a Prepaid Group Practice and a Community Hospital." *Medical Care* 18 (1980):916-929.
- Liebenluft, R.F. and Pollard, M.R.** "Antitrust Scrutiny of the Health Professions: Developing a Framework for Assessing Private Restraints." *Vanderbilt Law Review* 34 (May 1981):927-964.
- Lindsay, C.M.** "Medical Care and the Economics of Sharing." *Economica* 36 (November 1969):351-362.
- Lindsay, C.M.** "Measuring Human Capital Returns." *Journal of Political Economy* 79 (November/December 1971):1195-1215.
- *Lindsay, C.M.** "Real Returns to Medical Education." *The Journal of Human Resources* 8 (Summer 1973):331-348.
- Lindsay, C.M.** *Veterans Administration Hospitals: An Economic Analysis of Government Enterprise*. Washington, D.C.: American Enterprise Institute, 1975.
- Lindsay, C.M.** "A Theory of Government Enterprise." *Journal of Political Economy* 84 (October 1976):1061-1068.
- Lindsay, C.M.** *Canadian National Health Insurance: Lessons for the United States*. Nutley, New Jersey: Roche Laboratories, 1978.
- Lindsay, C.M., ed.** *The Pharmaceutical Industry: Economics, Performance and Government Regulation*. New York: John Wiley and Sons, 1978.
- Lindsay, C.M.** *National Health Issues: The British Experience*. Nutley, New Jersey: Roche Laboratories, 1980.
- Lindsay, C.M.** "The Organization of Medical Care Markets." In *New Directions in Public Health Care*, edited by C.M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1980.
- Lindsay, C.M. and Buchanan, J.M.** "The Organization and Financing of Medical Care in the United States." In *Health Services Financing*. London: The British Medical Association, 1970.
- Lindsay, C.M. and Leffler, K.B.** "The Long-Run Effects of National Health Insurance on Medical Care Prices and Output." In *New Directions in Public Health Care*, edited by C.M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1980.

- Lindsay, C.M. and Leffler, K.B.** "The Market for Medical Care." In *New Directions in Public Health Care*, edited by C.M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1980.
- Lindsay, C.M. and Seldon, A.** "More Evidence on Britain and Canada." In *New Directions in Public Health Care*, edited by C.M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1980.
- Link, C.R. et al.** "Cost Sharing, Supplemental Insurance, and Health Service Utilization Among the Medicare Elderly." *Health Care Financing Review* 2 (Fall 1980):25-32.
- Lipscomb, J. and Scheffler, R.** "Impact of the Expanded-Duty Assistants on Cost and Productivity in Dental Care Delivery." *Health Services Research* 10 (Spring 1975):14-35.
- Littleton, P.A., Jr.** "Differences Between the Medical and Dental Care Sector." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*, DHEW Publication No. (HRA) 80-27, Hyattsville, Maryland: Department of Health and Human Services, Bureau of Health Professions, 1981.
- *Lomansky, L.E.** "The Small but Crucial Role of Health Care Vouchers." *The Hastings Center Report* 11 (August 1981):40-42.
- Louis, D.Z. and McCord, J.J.** *Evaluation of California Prepaid Health Plans: Executive Summary*. Santa Barbara, California: General Research Corp., 1974.
- Lubalin, J.S. et al.** *Evaluation of the Accomplishments of Selected HMO's-Funded Projects*. DHEW Publication No. (HSA)105-74-10. Washington, D.C.: Department of Health, Education, and Welfare, 1974.
- Luft, H.S.** "How Do Health Maintenance Organizations Achieve Their 'Savings'?" *New England Journal of Medicine* 298 (June 15, 1978):1336-1343.
- Luft, H.S.** "HMOs and the Medical Care Market." In *Socioeconomic Issues of Health, 1980*, edited by D.E. Hough and G.I. Misek. Chicago, Illinois: American Medical Association, 1980.
- *Luft, H.S.** "Trends in Medical Care Costs: Do HMOs Lower the Rate of Growth?" *Medical Care* 18 (January 1980):1-16.
- *Luft, H.S.** "Assessing The Evidence on HMO Performance." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):501-536.
- Luft, H.S.** "HMOs and the Medical Care Market." In *Socioeconomic Issues of Health, 1980*, edited by D.E. Hough and G.I. Misek. Chicago, Illinois: American Medical Association, 1980.
- Luft, H.S.** "Health Maintenance Organizations and the Rationing of Medical Care." Paper prepared for the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, November 1981.
- Luft, H.S.** *Health Maintenance Organizations: Dimensions of Performance*. New York: Wiley-Interscience, 1981.
- Luft, H.S.** "On 'Implementing a Competitive Medical Care System Through Public Policy': A Comment on a Paper by Walter McClure." Prepared under HCFA Grant No. 18-P-97556/9-01 and NCHSR Grant No. 1 RO1 HS 04329-01.
- Luft, H.S. and Frisvold, G.A.** "Decisionmaking in Regional Health Planning Agencies." *Journal of Health Politics, Policy, and Law* 4 (1979):250-272.
- *Luft, H.S. and Trauner, J.B.** *The Operations and Performance of Health Maintenance Organizations*. Prepared under NCHSR Contract No. 233-79-3016, 1981.
- Luft, H.S. et al.** "Should Operations Be Regionalized? The Empirical Relation between Surgical Volume and Mortality." *New England Journal of Medicine* 301 (December 20, 1979):1364-1369.
- Lynk, W.J.** "Physician Influence on Blue Shield Plans: A Reexamination of the Findings." In *Socioeconomic Issues of Health, 1979*, edited by G. Misek. Chicago, Illinois: American Medical Association, 1979.
- *Lynk W.J.** "Regulatory Control of the Membership of Corporate Boards of Directors: The Blue Shield Case." *Journal of Law and Economics* 24 (April 1981):159-173.
- Lynk, W.J.** "Regulation and Competition: An Examination of the Consumer Choice Health Plan." *Journal of Health Politics, Policy and Law* 6 (Winter 1982):625-636.
- *Mabee, M.** *The Prudent Buyer Concept: Review and Evaluation of Its Use in the Health Care Industry*. Waltham, Massachusetts: University Health Policy Consortium, 1980.
- Mackie, D.L. and Biblo, R.L.** "HMO Development: Threat or Opportunity for Hospitals?" *American Journal of Law and Medicine* 6 (Spring 1980):29-49.
- Magee, R.P.** "An Evaluation of Prospective Payment Plans for Hospitals." *Journal of Business* 50 (October 1977):448-61.
- Manga, P.** "The Income Distribution Effect of Medical Insurance in Ontario." Ontario Economic Council Occasional Paper No. 6, Toronto, Canada, 1978.
- Mangiaracina, A.J.** "Health Care Politics and Cost Containment." *Bulletin of the New York Academy of Medicine* 56 (1980):83-86.

Manning, W. and Phelps, C. "The Demand for Dental Care." *Bell Journal of Economics* 10 (August 1979):503-525.

Manning, W. et al. "A Two-Part Model of the Demand for Medical Care: Preliminary Results From the Health Insurance Study." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

Marder, W.D. and Glandon, G.L. "The Competitive Effects of Health Maintenance Organizations." Paper presented at 56th Annual Western Economic Association Conference, July 1981, San Francisco, California.

Markel, G.A. *Per-Case Reimbursement for Medical Services*. DHEW Publication No. (PHS) 79-3230. Washington, D.C.: Department of Health, Education, and Welfare, 1978.

Marmor, T.R. and Morone, J.A. "Representing Consumer Interests: Imbalanced Markets, Health Planning, and the HSAs." *Milbank Memorial Fund Quarterly/Health and Society* 58 (1980):125-165.

***Marmor, T.R. et al.** "Medical Care and Procompetitive Reform." *Vanderbilt Law Review* 34 (May 1981):1003-1028.

***Marshall, J.M.** "Moral Hazard." *American Economic Review* 66 (December 1976):880-890.

***Masson, R.T. and Wu, S.** "Price Discrimination for Physicians' Services." *Journal of Human Resources* 9 (Winter 1974):63-79.

Mathematica Policy Research. *Responses of Canadian Physicians to the Introduction of Universal Medical Care Insurance: The First Five Years in Quebec*. DHEW Publication No. (PHS) 80-3229. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

***Maurizi, A.R.** "Occupational Licensing and the Public Interest." *Journal of Political Economy* 82 (March/April 1974):399-413.

***Maurizi, A.R.** *Public Policy and the Dental Care Market*. Washington, D.C.: American Enterprise Institute, 1975.

May, J.J. "The Impact of Health Planning on the Hospital Industry." Paper presented at the American Economic Association Meetings, December 1974, San Francisco, California.

May, J.J. "Utilization of Health Services and the Availability of Resources." In *Equity in Health Services*, edited by R. Andersen et al. Cambridge, Massachusetts: Ballinger Publishing Co., 1975.

Maynard, A. and Ludbrook, A. "Thirty Years of Fruitless Endeavor?: An Analysis of Government

Intervention in the Health Care Market." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

MacGregor, M. and Pelletier, G. "Planning of Specialized Health Facilities." *New England Journal of Medicine* 299 (1978):1235.

MacIntyre, D.M. *Voluntary Health Insurance and Rate Making*. Ithaca, New York: Cornell University, 1962.

McCarthy, C. "Incentive Reimbursement as an Impetus to Cost Containment." *Inquiry* 12 (December 1975):320-329.

McCarthy, E.G. et al. "Second Surgical Opinion Program: A Vehicle For Cost Containment?" In *National Commission on the Cost of Medical Care, Vol. 2: Collected Papers*. Chicago, Illinois: American Medical Association, 1978.

McCarthy, E.G. and Widmer, E. "Effect of Screening by Consultants on Recommended Elective Surgical Procedures." *New England Journal of Medicine* 293 (December 1974):1331-1335.

McCarthy, T.R. "The Competitive Nature of the Primary Care Physician Services Market." Working Paper Series 80-11, 1980, Oakland University, Rochester, Michigan.

McClure, W. *Memorandum I: Essential Points to Understanding the Major Options Available in National Health Insurance*. Excelsior, Minnesota: InterStudy, August 1974.

McClure, W. *Memorandum II: The Four Major Options for Cost Control Under National Health Insurance*. Excelsior, Minnesota: InterStudy, August 1974.

McClure, W. *Memorandum III: Specific Actions to Implement the Incentives Approach in National Health Insurance*. Excelsior, Minnesota: InterStudy, August 1974.

McClure, W. "Reducing Excess Hospital Capacity." Excelsior, Minnesota: InterStudy, October 1976.

***McClure, W.** "On Broadening the Definition of and Removing Regulatory Barriers to a Competitive Health Care System." *Journal of Health Politics, Policy, and Law* 3 (Fall 1978):303-327.

McClure, W. "An Analysis of Health Care Delivery System Performances Under a Proposed NHI Administrative Mechanism." In *Effects of the Payment Mechanism on the Health Care Delivery System*. DHEW Publication No. (PHS)78-3227. Washington, D.C.: Department of Health, Education, and Welfare, 1978.

McClure, W. *Comprehensive Market and Regulatory Strategies for Medical Care*. Excelsior, Minnesota: InterStudy, 1979.

- McClure, W.** "Role of Competition." *Bulletin of the New York Academy of Medicine* 57 (January/February 1981):45-50.
- ***McClure, W.** "Structure and Incentive Problems in Economic Regulation of Medical Care." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):107-144.
- McClure, W.** "Implementing a Competitive Medical Care System Through Public Policy." *Journal of Health Politics, Policy and Law*, in press.
- McGill, C.S.** "What Price Government Regulations?" *Western Journal of Medicine* 132 (1980):404-409.
- McGregor, M. and Pelletier, G.** "Planning of Specialized Health Facilities: Size vs. Cost and Effectiveness in Heart Surgery." *New England Journal of Medicine* 299 (July 1978):179-181.
- ***McGuire, T.G.** "Markets for Psychotherapy." In *Psychotherapy: Practice, Research and Policy*, edited by G. Van den Bos. Boston, Massachusetts: Sage Publishing Co., 1980.
- ***McGuire, T.G.** "Price and Membership in a Prepaid Group Practice." *Medical Care* 19 (February 1981):172-183.
- ***McLean, R.A.** "The Structure of the Market for Physicians Services." *Health Services Research* 15 (Fall 1980):271-280.
- McLean, R.A.** "Comment on: 'On the Structure of the Market for Physicians' Services'." *Health Services Research* (Fall 1981):68-69.
- McMahon, A.** "The Hospital's Perspective on Cost Containment." *Western Journal of Medicine* 132 (1980):399-403.
- McMenamin, P.** *On the Welfare Economics of Government Subsidized Demand for Health Care*. Working Paper OR-1, May 1980, Health Care Financing Administration, Washington, D.C.
- ***McNeil, R., Jr. and Schlenker, R.E.** "HMOs, Competition and Government." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):195-224.
- McNerney, W.J.** *Competition and Consumer Choice: National Health Care Legislative Proposals*. Chicago, Illinois: Blue Cross/Blue Shield Associations, undated.
- McNerney, W.J.** "The Many Elements of Cost Control." *Western Journal of Medicine* 132 (1980):385-391.
- Mechanic, D.** "Factors Affecting Receptivity to Innovations in Health-Care Delivery Among Primary-Care Physicians." In *Politics, Medicine and Social Disease*. New York: Wiley-Interscience, 1974.
- ***Mechanic, D.** "The Organization of Medical Practice and Practice Orientation Among Physicians in Prepaid and Nonprepaid Primary Care Settings." *Medical Care* 13 (March 1975):139-204.
- Mechanic, D.** *The Growth of Bureaucratic Medicine: An Inquiry into the Dynamics of Patient Behavior and the Organization of Medical Care*. New York: John Wiley and Sons, 1976.
- Mechanic, D.** "Some Dilemmas in Health Care Policy." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Winter 1981):15-N-15.
- Meier, G.B. and Tillotson, J.** *Physician Reimbursement and Hospital Use in HMOs*. Excelsior, Minnesota: InterStudy, September 1978.
- Meiller, T.F. and Resse, E.L.** "Dental School—Private Dental Practitioners: Competition versus Cooperation." *Journal of the Maryland State Dental Association* 23 (December 1980):168-71.
- ***Meilton, S.L.** "Cost Containment in the Health Care Industry: An Analysis of Physician Reimbursement Under Medicare and the Implication for Future Regulation in the Health Care Field." *Dickenson Law Review* 84 (Fall 1979):51-74.
- Meiners, M.R.** "An Econometric Analysis of the Major Determinants of Nursing Home Costs in the United States." *Journal of Social Science and Medicine*, in press.
- Mennemeyer, S.T.** "Really Great Returns to Medical Education?" *Journal of Human Resources* 13 (1978):75-90.
- Metzner, C.A. and Bashshur, R.L.** "Factors Associated with Choice of Health Care Plans." *Journal of Health & Social Behavior* 8 (December 1967):291-299.
- ***Meyer, J.A.** "Health Care Competition: Are Tax Incentives Enough?" In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.
- Meyer, S.M. et al.** "Ambulatory Medical Use by Federal Employees: Experience of Members in a Service Benefit Plan and in a Prepaid Group Practice Plan." Paper presented at the 105th Annual Meeting of the American Public Health Association, November 1977, Washington, D.C.
- Miccio, B.L.** "Rate Setting Promotes Interdepartmental Cooperation in Quality Assurance." *Hospitals* 55 (June 1, 1981):83-85.
- Milch, R.A.** "Cost Reimbursement and Price Competition In the Hospital Industry." *Health Care Management Review* 4 (1979):53-56.
- ***Mitchell, B.M. and Phelps, C.E.** "National Health Insurance: Some Costs and Effects of Mandated Employee Coverage." *Journal of Political Economy* 84 (1976):553-571.

***Mitchell, B.M. and Vogel, R.J.** "Health and Taxes: An Assessment of the Medical Deduction." *Southern Economic Journal* 41 (April 1975):660-672.

Mitchell, J.B. and Cromwell, J. "Physician-Induced Demand for Surgical Operations." *Health Care Financing Administration Grants and Contracts Report*, DHHS Publication No. (HCFA) 03086-81. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

Monheit, A.C. and Hornbrook, M.C. "Redistributive Effects of Hospital Reimbursement: Do Private/Charge Paying Patients Subsidize the Care of Public/Cost Paying Patients?" Paper presented at the Annual Meeting of the Eastern Economic Association, 19 April 1982, College Park, Maryland.

***Monsma, G.N., Jr.** "Marginal Revenue and the Demand for Physicians' Services." In *Empirical Studies in Health Economics*, edited by H.E. Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.

Moore, S.H. "Cost Containment Through Risk-Sharing by Primary-Care Physicians." *New England Journal of Medicine* 300 (June 14, 1979):1359-1362.

Moore, S.H. et al. "Cost Containment Through Risk-Sharing By Primary Care Physicians: A History of the Development of United States Health Care." *Health Care Financing Review* 1 (1980):1-13.

***Moran, D.W.** "HMOs, Competition, and the Politics of Minimum Benefits." *Mitbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):190-208.

Morrissey, M.A. "The Effects of Medicaid Reimbursement on Nursing Homes' Services." Final Report on Grant IR03-HS-03333 for The National Center for Health Services Research. Hyattsville, Maryland, 1979.

Morrissey, M.A. "An Analysis of Price and Service Competition Among Community Hospitals—An Exploratory Investigation." Paper presented at the Western Economic Association Convention, July 1981, San Francisco, California.

Morrissey, M.A. and Ashby, S. "An Empirical Analysis of HMO Market Share." Working Paper, July 1981, American Hospital Association, Chicago, Illinois.

***Morrissey, M.A. et al.** "Hospitals and Health Maintenance Organizations: An Analysis of the Minneapolis-St. Paul Experience." Working Paper, July 1980, American Hospital Association, Chicago, Illinois.

***Muller, C.F. and Otelsberg, J.** "Interim Research Findings on Physician Reimbursement under Medicare." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of

Health and Human Services, Health Care Financing Administration, 1980.

Munch, P. "Economic Incentives to Order Lab Tests: Theory and Evidence." In *Socioeconomic Issues of Health, 1980*, edited by D.E. Hough and G.I. Misek. Chicago, Illinois: American Medical Association, 1980.

***Musgrave, G.L.** "A Market Model of the Distribution of Dentists." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

Muzondo, T. and Pazderka, B. *Professional Licensing and Competition Policy: Effects of Licensing on Earnings and Rates of Return Differentials*. Ottawa, Canada: Consumer and Corporate Affairs, April 1979.

National Chamber Foundation. *A National Health Care Strategy: A Series of Five Reports on Business Involvement With Health*. Washington, D.C.: National Chamber Foundation, 1978.

***Needleman, J.** *Promoting Competition as a Regulatory Strategy*. Bethesda, Maryland: Alpha Center for Health Planning, 1980.

Nelson, P. "Information and Consumer Behavior." *Journal of Political Economy* 78 (March-April 1970):311-329.

Nelson, P. "Advertising as Information." *Journal of Political Economy* 82 (August 1974):729-754.

***Neuhauser, D.** "The Future of Proprietaries in American Health Services." In *Regulating the Health Facilities Construction*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.

Neuhauser, D. "Cost Containment: An Economists' View." *Western Journal of Medicine* 132 (1980):413-417.

Neuhauser, D. "Enthoven's 'Health Plan'." *New England Journal of Medicine* 303 (March 6, 1980):1115-1117.

Newachek, P.W. et al. "Income and Illness." *Medical Care* 18 (December 1980):1165-1176.

Newhouse, J.P. "Toward a Theory of Nonprofit Institutions: An Economic Model of a Hospital." *American Economic Review* 60 (March 1970):64-74.

***Newhouse, J.P.** "A Model of Physician Pricing." *Southern Economic Journal* 37 (October 1970):174-183.

Newhouse, J.P. "The Structure of Health Insurance and the Erosion of Competition in the Medical Marketplace." In *Profile of Medical Practice, 1979*, edited by J.C. Gaffney and G.L. Glandon. Chicago, Illinois: American Medical Association, 1979.

Newhouse, J.P. "The Demand for Medical Services: A Retrospect and Prospect." In *Health, Economics, and*

Health Economics, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

*Newhouse, J.P. "The Erosion of the Medical Marketplace." In *Advances for Health Economics and Health Services Research*, edited by R. Scheffler. Greenwich, Connecticut: JAI Press, 1981.

Newhouse, J.P. and Phelps, C.E. "New Estimates of Price and Income Elasticities of Medical Care Services." In *The Role of Health Insurance in the Health Services Sector*, edited by R.N. Rosett. New York: National Bureau of Economic Research, 1976.

86 Newhouse, J.P. and Slean, F.A. "Physician Pricing: Monopolistic or Competitive: Reply." *Southern Economic Journal* 39 (April 1972):577-580.

Newhouse, J.P. and Taylor, V. *A New Type of Hospital Insurance: A Proposal for an Experiment*. Santa Monica, California: The Rand Corporation, 1970.

*Newhouse, J.P. and Taylor, V. "How Shall We Pay for Hospital Care?" *The Public Interest* 23 (Spring 1971):78-92.

Newhouse, J.P. et al. *Policy Options and the Impact of National Health Insurance*. Santa Monica, California: The Rand Corporation, June 1974.

*Newhouse, J.P. et al. "How Sophisticated Are Consumers About the Medical Care Delivery System?" *Medical Care* 19 (March 1981):316-28.

Newhouse, J.P. et al. "Some Interim Results from a Controlled Trial of Cost Sharing in Health Insurance." *New England Journal of Medicine* 305 (December 1981):1501-1507.

Nichols, D. et al. "Discrimination by Waiting Time in Merit Goods." *American Economic Review* 61 (June 1971):312-323.

Niskanen, W. *Bureaucracy and Representative Government*. Chicago, Illinois: Aldine-Atherton, 1971.

Noll, R.G. *Reforming Regulation: An Evaluation of the Ash Council Proposals*. Washington, D.C.: Brookings Institution, 1974.

*Noll, R.G. "The Consequences of Public Utility Regulation of Hospitals." In *Controls on Health Care*. Washington, D.C.: National Academy of Sciences, 1975.

O'Donoghue, P. and Carlson, R.J. "Health Maintenance Organizations and Comprehensive Health Planning Agencies: Actual and Possible Relationships." In *Regulating Health Facilities Construction*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.

Olson, M., ed. *A New Approach to the Economics of Health Care*. Washington, D.C.: American Enterprise Institute, 1981.

Over, A.M., Jr. et al. *A Model of the Demand for Durable Medical Equipment*. Williamstown, Massachusetts: Williams College, March 1980.

Palmer, A.K. "Regulation, Professional Responsibility and Market Forces in the Health Care Field." *Journal of Medical Education* 4 (1979):275-283.

Pashigian, B.P. "Occupational Licensing and the Interstate Mobility of Professionals." *Journal of Law and Economics* 22 (April 1979):1-26.

*Paul, C.W. III. "Competition in the Medical Profession: An Application of the Economic Theory of Regulation." *Southern Economic Journal* 48 (January 1982):559-569.

*Pauly, M.V. "The Economics of Moral Hazard." *American Economic Review* 58 (June 1968):531-537.

*Pauly, M.V. "Efficiency, Incentives and Reimbursement for Health Care." *Inquiry* 7 (March 1970):114-131.

*Pauly, M.V. "The Welfare Economics of Community Rating." *Journal of Risk and Insurance* 31 (September 1970):407-418.

Pauly, M.V. *Medical Care at Public Expense*. New York: Praeger, 1971.

Pauly, M.V. "Overinsurance and Public Provision of Insurance: Moral Hazard and Adverse Selection." *Quarterly Journal of Economics* 89 (February 1974):44-62.

*Pauly, M.V. "The Behavior of Nonprofit Hospital Monopolies: Alternative Models of the Hospital." In *Regulating the Construction of Health Care Facilities*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.

Pauly, M.V. "Health Insurance and Hospital Behavior." In *New Directions in Public Health Care*, edited by C.M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1976.

Pauly, M.V. "Is Medical Care Different?" In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.

*Pauly, M.V. "The Ethics and Economics of Kickbacks and Fee-Splitting." *Bell Journal of Economics* 10 (Spring 1979):344-352.

Pauly, M.V. "What is Unnecessary Surgery?" *Milbank Memorial Fund Quarterly* 57 (1979):95-117.

*Pauly, M.V. *Doctors and Their Workshops*. Chicago, Illinois: University of Chicago Press, 1980.

*Pauly, M.V. "Overinsurance: The Conceptual Issues." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

*Pauly, M.V. "The Effect of Medical Staff Characteristics on Hospital Costs." In *Physicians and Financial Incentives*, edited by J.R. Gabel *et al.* Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.

*Pauly, M.V. "Hospital Characteristics, Physician Productivity, and Fee Levels." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.

Pauly, M.V. "Paying the Piper and Calling the Tune: The Relationship Between Public Financing and Public Regulation of Health Care." In *The New Approach to The Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

Pauly, M.V. and Drake, D.F. "The Effect of Third-Party Methods of Reimbursement on Hospital Performance." In *Empirical Studies in Health Economics*, edited by H. Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.

*Pauly, M.V. and Redisch, M. "The Not-for-Profit Hospital as a Physicians' Cooperative." *American Economic Review* 63 (March 1973):87-99.

Pauly, M.V. and Satterthwaite, M.A. "The Pricing of Primary Care Physicians' Services: A Test of the Role of Consumer Information." Working Paper No. 26, March 1979. Economics Department, Northwestern University, Evanston, Illinois.

*Pauly, M.V. and Satterthwaite, M.A. "The Effect of Provider Supply on Price." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA)80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

Pauly, M.V. and Satterthwaite, M.A. "The Pricing of Primary Care Physicians' Services: A Test of the Role of Consumer Information." *The Bell Journal of Economics* 12 (Autumn 1981):480-506.

Pearson, D.A. and Abernathy, D.S. "A Qualitative Assessment of Previous Efforts To Contain Hospital Costs." *Journal of Health Politics, Policy, and Law* 5 (1980):120-141.

Peel, E. and Scharff, J. "Impact of Cost-Sharing on Use of Ambulatory Services Under Medicare." *Social Security Bulletin* 36 (October 1973):3-24.

Penchansky, R. and Axelson, E. "Old Values, New Federalism, and Program Evaluation." *Medical Care* 12 (1974):893-905.

Perkoff, G.T. "An Effect of Organization of Medical Care Upon Health Manpower Distributions." *Medical Care* 16 (August 1978):628-640.

Perrott, G.S. *The Federal Employees Health Benefits: Program Enrollment and Utilization of Health Services, 1961-1968*. Washington, D.C.: Government Printing Office, 1971.

Pertschuk, M. "The FTC and Health Care: The Role of Competition." *Connecticut Medicine* 45 (April 1981):238-40.

Peterson, R.D. and MacPhee, G.R. *Economic Organization in Medical Equipment and Supply*. Lexington, Massachusetts: D.C. Heath and Co. 1973.

Phelps, C.E. "Price and Income Elasticities for Medical Care." In *Economics of Health and Medical Care*, edited by M. Perlman. London: MacMillan & Co., 1974.

Phelps, C.E. "Effects of Insurance on Demand for Medical Care." In *Equity in Health Services: Empirical Analyses in Social Policy*, edited by R. Andersen. Cambridge, Massachusetts: Ballinger Publishing Co., 1975.

Phelps, C.E. "Benefit-Cost Analysis of Quality Assurance Programs." In *Quality Assurance in Health Care*, edited by P. Gertman and R. Egdaahl. Germantown, Maryland: Aspen Systems Corporation, 1976.

Phelps, C.E. "The Demand for Reimbursement Insurance." In *Proceedings of NBER Conference on Health Insurance and Medical Care*, edited by R. Rosett. New York: National Bureau of Economic Research, 1976.

Phelps, C.E. "The Demand for Reimbursement Insurance." In *Proceedings of NBER Conference on Health Insurance and Medical Care*, edited by R. Rosett. New York: National Bureau of Economic Research, 1976.

Phelps, C.E. "National Health Insurance: Some Costs and Effects of Mandated Employee Coverage." *Journal of Political Economy* 84 (June 1976):553-571.

Phelps, C.E. *Insurance Benefits and Their Impact on Health Care Costs*. Santa Monica, California: The Rand Corporation, April 1977.

Phelps, C.E. *Experience Rating in Medical Malpractice Insurance*. Santa Monica, California: Rand Corporation, May 1978.

Phelps, C.E. "Illness Prevention and Medical Insurance." *The Journal of Human Resources* 13 (Supplement Autumn 1978):187-207.

- Phelps, C.E.** "National Health Insurance by Regulation: Mandated Employee Benefits." In *National Health Insurance: What Now, What Later, What Never*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.
- Phelps, C.E.** "Public Sector Medicine: History and Analysis." In *New Directions in Public Health Care*, edited by C.M. Lindsay. San Francisco, California: Institute for Contemporary Studies, 1980.
- Phelps, J. et al.** "Policy Options and National Health Insurance." *The New England Journal of Medicine* 290 (June 13, 1974)
- 88 **Pierson, R.N. Jr.** "Promising Approaches to Cost Containment: A View From the Medical Profession." *Bulletin of the New York Academy of Medicine* 56 (1980):164-168.
- Pollard, M.R.** "Fostering Competition in Health Care." In *Regulating Health Care: The Struggles for Control*, edited by A. Levin. Montpelier, Vermont: Capitol City Press, 1980.
- Pollard, M.R.** "The Essential Role of Antitrust in a Competitive Market for Health Services." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):256-268.
- Pollard, M.R. and Leibenluft, R.F.** *Antitrust and the Health Professions: Policy Planning Issues Paper*. Washington, D.C.: Federal Trade Commission, 1981.
- Posner, R.A.** "Certificates of Need for Health Care Facilities: A Dissenting View." In *Regulating Health Facilities Construction*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.
- Pozen, M.W. et al.** "Utilization of CNI Procedures in the U.S.: An Analysis of the Extent and Costs." Discussion Paper, April 1980, University Health Policy Consortium, Waltham, Massachusetts.
- Praiss, I.L. et al.** "Quality of Dental Care—The Role of Third Party Payers: A Literature Review." *Medical Care Review* 6 (December 1978):1211-1233.
- Praiss, I.L. et al.** "Changing Patterns and Implications for Cost and Quality of Dental Care." *Inquiry* 16 (Summer 1979):131-140.
- Prussin, J.A.** "Factors in HMO Site Selection." *Abstracts of Hospital Management Studies* 11 (1975):23.
- Rabkin, M.T. and Melin, C.N.** "The Impact of Technology Upon the Cost and Quality of Hospital Care and a Proposal for Control of New and Expensive Technology." In *Technology and the Quality of Health*, edited by E.R. Care and P. Gertman. Germantown, Maryland: Aspen Systems Corporation, 1978.
- *Ramsey, J.B.** "An Analysis of Competing Hypothesis of the Demand For and Supply of Physicians Services." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.
- Raskin, I.E. et al.** "Controlling Health Care Costs: An Evaluation of Strategies." *Evaluation and Program Planning* 3 (1980):1-14.
- Rayack, E.** *Professional Power and American Medicine: The Economics of the American Medical Association*. New York: World Publishing Co., 1967.
- Reder, M.W.** "Some Problems in the Measurement of Productivity in the Medical Care Industry." In *Production and Productivity in the Service Industries*, edited by V. Fuchs. New York: National Bureau of Economic Research, 1967.
- *Redisch, M.** "Physician Involvement in Hospital Decisionmaking." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.
- *Redisch, M. et al.** "Physician Pricing, Cost and Income." In *Advances for Health Economics and Health Services Research*, edited by R. Scheffler. Greenwich, Connecticut: JAI Press, 1981.
- Reilly, B.J. and Fuhr, J.P.** "Cost Containment in Medical Care: Competition's Potential in a Captured System." Chester, Pennsylvania: Widener University, 1981.
- Reilly, J.F.** "The Impact of Cost Containment on the Voluntary Community Hospital." *Bulletin of the New York Academy of Medicine* 50 (1980):87-93.
- Reinhardt, U.E.** "A Production Function for Physician Services." *Review of Economics and Statistics* 54 (February 1972):55-66.
- Reinhardt, U.E.** "Proposed Changes in the Organization of Health Care Delivery: An Overview and Critique." *Milbank Memorial Fund Quarterly* 51 (Spring 1973):169-222.
- Reinhardt, U.E.** *Physician Productivity and the Demand for Health Manpower*. Cambridge, Massachusetts: Ballinger Publishing Co., 1974.
- Reinhardt, U.E.** "Alternative Methods of Reimbursing Non-Institutional Providers of Health Services." In *Controls of Health Care*. Washington, D.C.: National Academy of Sciences, 1975.
- Reinhardt, U.E.** "Comment on 'Competition Among Physicians'." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1979.

Reinhardt, U.E. "Health Insurance and Cost Containment Policies: The Experience Abroad." *American Economic Review* 70 (May 1980):149.

Reinhardt, U.E. "Table Manners At the Health Care Feast: Regulation vs. Market." Paper presented to the Sixth Private Sector Conference, March 23-25, 1981, Duke University Medical Center, Durham, North Carolina.

Reinhardt, U.E. "The GMENAC Forecast: An Alternative View." *American Journal of Public Health* 71 (October 1981):1149-1157.

***Relman, A.S.** "The New Medical-Industrial Complex." *New England Journal of Medicine* 303 (October 1980):963-970.

Rempel, P.H., Jr. "Effect of Governmental Regulation on the Vendor." *Hospital Materials Management Quarterly* 2 (1980):11-18.

"Restrictive Licensing of Dental Paraprofessionals." *Yale Law Journal* No. 4, 83 (1974):806-826.

Rettig, R.A. "The Politics of Health Cost Containment: End-stage Renal Disease." *Bulletin of the New York Academy of Medicine* 56 (1980):115-138.

Rice, R. G. "Analysis of the Hospital as an Economic Organization." *Modern Hospital* 106 (April 1966):87-91.

Richardson, J. "The Inducement Hypothesis: That Doctors Generate Demand for Their Own Services." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

***Richardson, W.C. et al.** "Comparisons of Prepaid Health Care Plans In a Competitive Market: The Seattle Prepaid Health Care Project." DHEW Publication No. (PHS) 80-3199. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

Riffer, J. "Competition Will Not Cut Costs, Health Economists Claim." *Hospitals* 54 (July 1, 1980):17-19.

Rivlin, A.M. "An Analysis of the National Health Care Reform Act of 1981 (H.R.850)." The Congress of the United States, Congressional Budget Office, September 30, 1981.

Rivlin, A.M. "The Effect of the Tax Laws on Health Insurance and Medical Cost." Statement by the Director of the Congressional Budget Office before the Committee on Ways and Means and the Committee on the Budget, U.S. House of Representatives, July 9, 1979.

Robertson, R.L. "Comparative Medical Care Use Under Prepaid Group Practice and Free Choice Plans: A Case Study." *Inquiry* 9 (September 1972):70-76.

Robbins, D. "Comment on 'Competition Among Health Insurers.'" In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.

Rodgers, J.F. "Trends in Physician Negotiations." In *Socioeconomic Issues of Health 1981*, edited by N.A. Musacchio and D.E. Hough. Chicago, Illinois: American Medical Association, 1981.

Roehrig, C.S. "A Formal Model of Target Income Pricing with Supplier- Induced Demand." In *The Target Income Hypothesis and Related Issues in Health Manpower Policy*. DHEW Publication No. (HRA) 80-27. Washington, D.C.: Department of Health, Education, and Welfare, 1980.

Roemer, M.I. "Bed Supply and Hospital Utilization: A National Experiment." *Hospitals, J.A.H.A.* 35 (November 1961):998-993.

Roemer, M.I. and Dubois, D.M. "Medical Costs In Relation To The Organization of Ambulatory Care." *New England Journal of Medicine* 280 (May 1, 1969):988-993.

Roemer, M. and Friedman, J. *Doctors in Hospitals: Medical Staff Utilization and Hospital Performance*. Baltimore, Maryland: John Hopkins University Press, 1971.

Roemer, M.I. and Roemer, J.E. "The Social Consequences of Free Trade in Health Care: A Public Health Response to Orthodox Economics." *International Journal of Health Services* 12 (1982):111-129.

Roemer, M.I. and Shain, S. *Hospital Utilization Under Insurance*. Chicago, Illinois: American Hospital Association, 1959.

Roemer, M.I. and Shonick, W. "HMO Performance: The Recent Evidence." *Health and Society* 51 (Summer 1973):271-317.

***Roemer, M.I. et al.** *Health Insurance Effects: Services, Expenditures and Attitudes Under Three Types of Plans*. Bureau of Public Health Economics, Research Series No. 16. Ann Arbor, Michigan: University of Michigan, 1973.

***Roemer, R.** "Licensing and Regulation of Medical and Medical-related Practitioners in Health Service Teams." *Medical Care* 9 (January/February 1971):42-54.

Rosen, S. "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition." *Journal of Political Economy* 82 (January/February 1974):34-55.

***Rosenblatt, R.E.** "Health Care Reform and Administrative Law: A Structural Approach." *Yale Law Journal* 88 (December 1978):243-336.

- Rosenblatt, R.E.** "Health Care Markets and Democratic Values." *Vanderbilt Law Review* 34 (May 1981):1067-1116.
- Rosenthal, G.** "The Operating Structure of the Medical Care System—An Overview." In *Federal Programs for the Development of Human Resources*. Washington, D.C.: The Congress of the United States, Joint Economic Committee, 1968.
- Rosenthal, G.** "Price Elasticity of Demand for Short-Term General Hospital Services." In *Empirical Studies in Health Economics*, edited by H. Kiarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.
- Rossett, R.N.** "Proprietary Hospitals in the United States." In *The Economics of Health and Medical Care*, edited by M. Perlman. London, England: Macmillan and Co., 1974.
- Rossett, R.N. and Huang, L.F.** "Redistribution of Income through Blue Cross Community-Rated Premiums." Discussion Paper No. 72-9, June 1972, Economics Department, University of Rochester, Rochester, New York.
- Rossett, R.N. and Huang, L.F.** "The Effect of Health Insurance on the Demand for Medical Care." *Journal of Political Economy* 81 (March-April 1973):281-305.
- *Rossiter, L.F.** "Who Initiates Visits to a Physician?" In *Data Preview 3*. DHHS Publication No. (PHS) 81-3291. Washington, D.C.: Department of Health and Human Services, 1980.
- Rossiter, L.F.** "Dental Services: Use, Expenditures, and Sources of Payment." In *Data Preview 8*. DHHS Publication No. (PHS) 82-3319. Washington, D.C.: Department of Health and Human Services, 1982.
- *Rossiter, L.F. and Taylor, A.K.** "The Effects of Unionism on the Provision of Health Insurance Benefits." In *Industrial Relations*, forthcoming.
- Rothenberg, E.** *Regulation and Expansion of Health Facilities: the Certificate of Need Experience in New York State*. New York: Praeger, 1976.
- Rothschild, M.** "Models of Market Organization with Imperfect Information." *Journal of Political Economy* 81 (November-December 1973):1283-1308.
- Rothschild, M. and Stiglitz, J.** "Equilibrium in Competitive Insurance Markets: An Essay in the Economics of Imperfect Information." *Quarterly Journal of Economics* 90 (1976):629-649.
- Ruchlin, H.S. and Rosen, H.M.** "Short-Run Hospital Responses to Reimbursement Rate Changes." *Inquiry* 17 (1980):42-53.
- *Rufin, R. and Leigh, D.E.** "Charity, Competition, and the Pricing of Doctors' Services." *Journal of Human Resources* 8 (Spring 1973):212-222.
- *Rushefsky, M.E.** "A Critique of Market Reform in Health Care: The Consumer Choice Health Plan." *Journal of Health Politics, Policy, and Law* 5 (Winter 1981):720-741.
- *Russell, L.B.** *Technology in Hospitals*. Washington, D.C.: Brookings Institution, 1979.
- Salkever, D.S.** "Will Regulation Control Health-Care Costs?" *Bulletin of the New York Academy of Medicine* 54 (January 1978):73-83.
- Salkever, D.S.** "Competition Among Hospitals." *Hospital and Health Services Administration* 25 (1980):56-70.
- *Salkever, D.S. and Bice, T.W.** "The Impact of Certificate-of-Need Controls on Hospital Investment." *Milbank Memorial Fund Quarterly/Health and Society* 54 (Spring 1976):185-214.
- Salkever, D.S. and Bice, T.W.** "Certificate-of-Need Legislation and Hospital Costs." In *Hospital Cost Containment: Suggested Notes for Future Policy*, edited by M. Zubkoff et al. New York: Prodist, 1978.
- Salkever, D.S. and Bice, T.W.** *Hospital Certificate-of-Need Controls: Impact on Investment, Costs, and Use*. Washington, D.C.: American Enterprise Institute, 1979.
- Salop, S.** "Information and Monopolistic Competition." *American Economic Review* 66 (May 1976):240-245.
- Sammons, J.H.** "Medicine's Role in Health Care Cost Containment." *Western Journal of Medicine* 132 (1980):392-398.
- *Sapolsky, H. et al.** *Corporate Attitudes Towards Health Care Costs*. Final Report, NCHSR Grant No. 1R03 HS 03447-0151, December 1980.
- Saving, T.R.** "The Impact of Dental Practice Acts on the Price of Dental Services and the Use of Inputs." In *Proceedings of the Conference on Modeling Techniques and Applications in Dentistry*. Hyattsville, Maryland: Department of Health, Education, and Welfare, Bureau of Health Professions, 1980.
- Saward, E.W. and Greenlick, M.R.** "Health Policy and the HMO." *Milbank Memorial Fund Quarterly/Health and Society* 50 (April 1972):147-176.
- Scanlon, W.** "A Theory of the Nursing Home Market." *Inquiry* 17 (Spring 1980):25-41.
- *Scheffler, R.M.** "The Pricing Behavior of Medical Groups." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):225-240.
- Scheffler, R., ed.** *Advances In Health Economics and Health Services Research*. Greenwich, Connecticut: JAI Press, 1981.

Schlenker, R.E. et al. *Socioeconomic and Legal Factors Associated with HMO Presence: An Examination of State Data.* Excelsior, Minn.: InterStudy, October 1973.

***Schoen, M.H.** "Alternative Oral Health Service Delivery Systems." *Family and Community Health* 3 (November 1980):71-80.

Schonbrun, M. "The Future of Blue Cross." *Journal of Health Politics, Policy and Law* 2 (1977):319-334.

***Schroeder, S.A. and Showstack, J.A.** "Financial Incentives to Perform Medical Procedures and Laboratory Tests: Illustrative Models of Office Practice." *Medical Care* 16 (April 1978):289-298.

Schroeder, S.A. et al. "Frequency and Clinical Description of High Cost Patients in 17 Acute Care Hospitals." *New England Journal of Medicine* 300 (1979):1306-1309.

Schultz, D.P. et al. "Study Examines Prescription Fees and Services Offered by Pharmacy." *Hospitals* 51 (May 1, 1977):78-85.

Scitovsky, A.A. "The Use of Medical Services Under Prepaid and Fee-For-Service Group Practices." *Social Science and Medicine* 15 (1981):107-116.

Scitovsky, A.A. and McCall, N. "Coinsurance and the Demand for Physician Services: Four Years Later." *Social Security Bulletin* 40 (May 1977):19-26.

***Scitovsky, A.A. and McCall, N.** "Use of Hospital Services Under Two Prepaid Plans." *Medical Care* 18 (January 1980):30-41.

Scitovsky, A.A. and Snyder, N.M. "Effect of Coinsurance on Use of Physician Services." *Social Security Bulletin* 35 (June 1972):3-19.

***Scitovsky, A.A. et al.** "Factors Affecting the Choice between Two Prepaid Plans." *Medical Care* 16 (August 1978):660-681.

***Seidman, L.S.** "Medical Loans and Major-Risk National Health Insurance." *Health Services Research* 12 (Summer 1977):123-128.

***Seidman, L.S.** "Consumer Choice Health Plan and the Patient Cost-Sharing Strategy: Can They Be Reconciled?" In *The New Approach to the Economics of Health*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1980.

***Seidman, L.S.** "Income-Related Consumer Cost Sharing: A Strategy for the Health Sector." In *National Health Insurance*, edited by M. Pauly. Washington, D.C.: American Enterprise Institute, 1980.

***Shaffert, T. et al.** "Study of Reimbursement and Practice Arrangements of Provider-Based Physicians." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of

Health and Human Services, Health Care Financing Administration, 1981.

Shalit, S.S. "Barriers to Entry in the American Hospital Industry." Ph.D. dissertation, University of Chicago, September 1970.

***Shalit, S.S.** "A Doctor-Hospital Cartel Theory." *Journal of Business* 50 (January 1977):1-20.

Shapiro, S. "Competition Bills Won't Cut Costs, Benefit Execs Say." *Business Insurance* (October 13, 1980):3-36.

***Shepard, L.** "Licensing Restrictions and the Cost of Dental Care." *Journal of Law and Economics* 21 (1978):187-201.

Shortell, S.M. and Getzen, T.E. "Measuring Hospital Medical Staff Organizational Structure." *Health Services Research* 14 (1979):97-110.

***Shulman, D. and Galanter, R.** "Reorganizing the Nursing Home Industry: A Proposal." *Milbank Memorial Fund Quarterly/Health and Society* 54 (Spring 1976):129-143.

Sibery, D.E. "The Impact of Cost Containment on the Health System and the Patient: The View From Blue Cross." *Bulletin of the New York Academy of Medicine* 56 (1980):94-97.

Sigelman, D.W. "Palm-Reading the Invisible Hand: A Critical Examination of Pro-Competitive Reform Proposals." *Journal of Health Politics, Policy and Law* 6 (Winter 1982):578-620.

Silver, L.H. "The Legal Accountability of Nonprofit Hospitals." In *Regulating Health Facilities Construction*, edited by C.C. Havighurst. Washington, D.C.: American Enterprise Institute, 1974.

Sindelar, J.L. "Why Women Use More Medical Care." Paper presented to Bureau of Economics Staff, February 16, 1979, Federal Trade Commission, Washington, D.C.

Sindelar, J.L. "The Value of Time and The Use of Medical Care." In *Socioeconomic Issues of Health*, edited by N. Musaccio and D. Hough. Chicago, Illinois: American Medical Association, 1981.

Skinner, D.E. and Deane, R.T. "Incentive Reimbursement: A New Approach." *Nursing Homes* 15 (July/August 1978):2-12.

Sloan, F.A. "Lifetime Earnings and Physicians' Choice of Specialty." *Industrial and Labor Relations Review* 24 (October 1970):39-50.

***Sloan, F.A.** "Effects of Incentives on Physician Performance." In *Health Manpower and Productivity: The Literature and Required Future Research*, edited by J. Rafferty. Lexington, Massachusetts: Lexington Books, 1974.

- *Sloan, F.A.** "Physician Fee Inflation: Evidence from the Late 1960's." In *The Role of Health Insurance in the Health Services Sector*, edited by R.N. Rosset. New York: National Bureau of Economic Research, 1976.
- Sloan, F.A.** "Real Returns to Medical Education: A Comment." *Journal of Human Resources* 11 (Winter 1976):118-126.
- Sloan, F.A.** "The Demand for Physicians' Services in Alternative Practice Settings: A Multiple Logit Analysis." *Quarterly Review of Economics and Business* 18 (Spring 1978):41-61.
- Sloan, F.A.** "Is the Market for Physicians' Services Monopolistic or Competitive?" In *Profile of Medical Practice, 1979*, edited by J.C. Gaffney and G.L. Glandon. Chicago, Illinois: American Medical Association, 1979.
- *Sloan, F.A.** "Effects of Health Insurance on Physician's Fees." Paper presented at the Southern Economic Association Meetings, November 6, 1980, Washington, D.C.
- *Sloan, F.A.** "Physicians and Blue Shield: A Study of the Effect of Physician Control of Blue Shield Reimbursements." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1981.
- Sloan, F.A.** "Regulation and the Rising Cost of Hospital Care." *Review of Economics and Statistics* 63 (November 1981):479-487.
- *Sloan, F.A.** "Government and the Regulation of Hospital Care." *American Economic Review*, forthcoming, May 1982.
- *Sloan, F.A. and Feldman, R.** "Competition Among Physicians." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.
- Sloan, F.A. and Lorant, J.** "The Allocation of Physicians' Services: Evidence on Length of Visit." *Quarterly Review of Economics and Business* 50 (1977):85-104.
- Sloan, F.A. and Lorant, J.** "The Role of Waiting Time: Evidence from Physicians' Practices." *Journal of Business* 50 (1977):486-507.
- Sloan, F.A. and Steinwald, B.** "Determinants of Physicians' Fees." *Journal of Business* 47 (October 1974):493-511.
- *Sloan, F.A. and Steinwald, B.** "The Role of Health Insurance in the Physicians' Services Market." *Inquiry* 12 (December 1975):275-299.
- Sloan, F.A. and Steinwald, B.** "Analysis of Physician Price and Output Decisions." In *NCHSR Research Digest Series*. DHEW Publication No. (HRA)77-3171. Washington, D.C.: Department of Health, Education, and Welfare, 1977.
- Sloan, F.A. and Steinwald, B.** "Effects of Regulation on Hospital Costs and Input Use." *Journal of Law and Economics* (April 1980):27-55.
- Sloan, F.A. and Steinwald, B.** *Insurance, Regulation, and Hospital Costs*. Lexington, Massachusetts: Lexington Books, 1980.
- Somers, A.R. and Somers, H.M.** "A Proposed Framework for Health and Health Care Policies." *Inquiry* 14 (June 1977):115-168.
- Spence, A.M.** "Product Differentiation and Welfare." *American Economic Review* 66 (May 1976):407-414.
- Spiegel, A.D. et al.** "Issues and Opportunities in the Regulation of Home Health Care." *Health Policy and Education* 1 (1980):237-253.
- *Stano, M.** "Individual Health Accounts: An Alternate Health Care Financing Approach." *Health Care Financing Review* 3 (September 1981):117-125.
- *Steele, H.** "Monopoly and Competition in the Ethical Drugs Market." *Journal of Law and Economics* 5 (October 1962):131-163.
- Steinwald, B. and Newhauser, D.** "The Role of the Proprietary Hospital." *Law and Contemporary Problems* (Autumn 1970):817-838.
- Steinwald, B. and Sloan, F.A.** "Determinants of Physicians' Fees." *Journal of Business* 47 (October 1974):493-511.
- *Steuerle, E. and Hoffman, R.** "Tax Expenditures for Health Care." *National Tax Journal* 32 (June 1979):101-115.
- Stevens, C.M.** "Hospital Market Efficiency: The Anatomy of the Supply Response." In *Empirical Studies on Health Economics*, edited by H. Klarman. Baltimore, Maryland: The Johns Hopkins Press, 1970.
- Stevens, R.** "Review of Alain Entoven's *Health Plan*." *Medical Care* (November 1981).
- Stevenson, G.** "Laws of Motion in the For-Profit Health Industry: A Theory and Three Examples." *International Journal of Health Services* 8 (1978):235-56.
- Stigler, G.J.** "The Economics of Information." *Journal of Political Economy* 69 (June 1961):213-215.
- Stigler, G.J.** "The Theory of Economic Regulation." *The Bell Journal of Economics and Management Science* 2 (Spring 1971):3-21.
- Taylor, A.K.** "Government Health Policy and Hospital Labor Costs: The Effects of Wage and Price Controls on Hospital Wage Rates and Employment." *Public Policy* 27 (Spring 1979):203-225.

- Taylor, A.K. and Lawson, W.R.** "Employer and Employee Expenditures for Private Health Insurance." In *Data Preview 7*. DHHS Publication No. (PHS) 81-3297. Washington, D.C.: Department of Health and Human Services, Health Services Financing Administration, 1981.
- Taylor, R.A.** "Principles of the Economic Behavior of Hospitals." *Nebraska Journal of Economics and Business* 11 (Spring 1972):45-53.
- *Tessler, R. and Mechanic, D.** "Factors Affecting the Choice Between Prepaid Group Practice and Alternative Insurance Programs." *Milbank Memorial Fund Quarterly/Health and Society* 53 (Spring 1975):149-172.
- Thurlow, R.** "Short-Stay Surgery at Half the Hospital Cost." *Medical Economics* 47 (April 1970):152.
- Tierny, T.M.** "The Health Care Industry: Regulation or Private Enterprise." *Hospital Material Management Quarterly* 2 (1980):27-33.
- *Ting, H.M.** "The Economics of Health Maintenance Organizations." Ph.D. dissertation, Stanford University, 1975.
- Turshen, M.** "An Analysis of the Medical Supply Industries." *International Journal of Health Services* 6 (1976):271-94.
- U.S. Congress, Hearings Before the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary.** "Competition In the Health Services Market," United States, Senate Ninety-Third Congress, Second Session, Part I, 1974.
- *U.S. Congress, Congressional Budget Office.** *Expenditures for Health Care: Federal Programs and Their Effects*. Washington, D.C.: Government Printing Office, August 1977.
- U.S. Congress, Congressional Budget Office.** *Controlling Rising Hospital Costs*. Washington, D.C.: Government Printing Office, September 1979.
- *U.S. Congress, Congressional Budget Office.** *Tax Subsidies for Medical Care: Current Policies and Possible Alternatives*. Washington D.C.: Government Printing Office, January 1980.
- U.S. Congress, Congressional Budget Office.** *The CBO Hospital Cost Containment Model: A Technical Analysis*. Washington, D.C.: Government Printing Office, February 1981.
- U.S. Congress, Congressional Budget Office.** *Medicaid: Choices for 1982 and Beyond*. Washington, D.C.: Government Printing Office, June 1981.
- U.S. General Accounting Office.** *Performance of the Social Security Administration Compared With that of Private Fiscal Intermediaries in Dealing with Institutional Providers of Medicare Services*. Washington, D.C.: General Accounting Office, 1975.
- U.S. General Accounting Office.** *Public Representation on Boards and Blue Shield Allowances: Important Relationship Not Found*. Washington, D.C.: General Accounting Office, December 31, 1980.
- Van de Ven, W.P.M.M. and Van Praag, B.M.S.** "Risk Aversion and Deductibles in Private Health Insurance: Application of An Adjusted Tobit Model to Family Health Care Expenditures." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co. 1981.
- Vladeck, B.C.** "The Politics of Cost Containment and Resource Allocation: Experiences in Health Planning and Resource Development." *Bulletin of the New York Academy of Medicine* 56 (1980):139-144.
- Vladeck, B.C.** "The Market vs. Regulation: The Case for Regulation." *Milbank Memorial Fund Quarterly/Health and Society* 59 (Spring 1981):209-23.
- *Vogel, R.** "The Effects of Taxation on the Differential Efficiency of Nonprofit Health Insurance." *Economic Inquiry* 15 (October 1977):605-609.
- *Vogel, R.** "The Tax Treatment of Health Insurance Premiums as a Cause of Overinsurance." In *National Health Insurance: What Now, What Later, What Never?*, edited by M.V. Pauly. Washington, D.C.: American Enterprise Institute, 1980.
- Walsh, D.C.** "The Health Insurance Industry: Structural and Strategic Changes in an Uncertain Environment." *Health Care Management Review* 5 (Summer 1980):71-85.
- Warner, K.E.** "The Economic Implications of Preventive Health Care." *Social Science and Medicine* 13 (1979):227-237.
- Watts, C.A.** "A Managerial Discretion Model for Hospitals." Ph.D. dissertation, Johns Hopkins University, 1976.
- *Weiner, S.M.** "Governmental Regulation of Health Care: A Response to Some Criticisms Voiced by Proponents of a Free Market." *American Journal of Law and Medicine* 4 (Spring 1978):15-33.
- Weiner, S.M.** "Health Care Policy and Politics: Does The Past Tell Us Anything About the Future?" *American Journal of Law and Medicine* 5 (Winter 1980):331-41.
- Weiner, S.M.** "On Public Values and Private Regulation: Some Reflections on Cost Containment Strategies." *Milbank Memorial Fund Quarterly/Health and Society* 59 (1981):269-296.

- Weisbrod, B.A.** "Comment on 'Is Medical Care Different?'" In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.
- Weisbrod, B.A.** "Benefit-Cost Analysis of a Controlled Experiment: Treating the Mentally Ill." *Journal of Human Resources* 16 (Fall 1981):523-48.
- Wendling, W.** "A Reexamination of the Impact of Certificate-of-Need Laws." In *Socioeconomic Issues of Health*, edited by J.L. Werner and J.R. Leopold. Chicago, Illinois: American Medical Association, 1978.
- Wendling, W. and Werner, J.** "Nonprofit Firms and the Economic Theory of Regulation." *Quarterly Journal of Economics and Business* 20 (Fall 1980):192-199.
- *Wennberg, J. et al.** "An Epidemiologic Perspective on the Problem of Supplier-Induced Demand: The Case of Surgery and Surgical Second Opinions." In *Physicians and Financial Incentives*, edited by J.R. Gabel et al. Washington, D.C.: Department of Health and Human Services, Health Care Financing Administration, 1980.
- Wennberg, J. et al.** "Professional Uncertainty and the Problem of Supplier-Induced Demand." *Social Science and Medicine*, in press.
- Wersinger, R. and Sorenson, A.** *An Analysis of the Health Status, Utilization, and Cost Experience of an HMO Population Compared to a Blue Cross/Blue Shield Matched Control Group*. Rochester, New York: University of Rochester, School of Medicine, 1980.
- White, A.J.** "Tax Policy and HMOs: The Case for a Section 501 (c)(3) Tax Exemption." *American Journal of Law and Medicine* 6 (Summer 1980):283-313.
- White, L.J.** "Market Structure and Product Varieties." *American Economic Review* 67 (March 1977):179-182.
- White, W.D.** "The Impact of Occupational Licensure of Clinical Laboratory Personnel." *Journal of Human Resources* 13 (Winter 1978): 91-102.
- White, W.D.** "Regulating Competition In a Non-Profit Industry: The Problem of For-Profit Hospitals." *Inquiry* 16 (1979):50-61.
- White, W.D.** "The American Hospital Industry Since 1900: A Short History." In *Advances in Health Economics and Health Services Research*, edited by R. Scheffler. Greenwich, Connecticut: JAI Press, in press.
- Whittington, H.G.** "A Case for Private Enterprise in Mental Health." *Administration of Mental Health* (Spring 1975):23-28.
- Wiggins, S.N.** "Product Quality Regulation and New Drug Introductions: Some New Evidence from the 1970s." *Review of Economics and Statistics* 63 (November 1981):615-619.
- *Wilensky, G.R.** "Government and the Financing of Health Care." *American Economic Review*, forthcoming, May 1982.
- Wilensky, G.R. and Rossiter, L.F.** "The Magnitude and Determinants of Physician Initiated Visits in the U.S." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.
- Willemain, T.R.** "Second Thoughts About Outcome Incentives for Nursing Homes." Discussion Paper, August 1970, University Health Policy Consortium, Waltham, Massachusetts.
- Willemain, T.R.** "Survey-based Indices for Nursing Home Quality Incentive Reimbursement." Discussion Paper, June 1981, University Health Policy Consortium, Waltham, Massachusetts.
- Williams, A.** "Welfare Economics and Health Status Measurement." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.
- Williams, J.J. et al.** "A Survey of Family Medical Care Under Three Types of Health Insurance." *Journal of Chronic Diseases* 17 (September 1964):879-884.
- Williams, R.L.** "Outcome-Based Measurements of Medical Care Output." Ph.D. dissertation, University of California, Santa Barbara, 1974.
- Williams, R.L.** "Explaining a Health Care Paradox." *Policy Sciences* 6 (1975):91-101.
- Wilson, C.** "A Model of Insurance Markets With Imperfect Information." *Journal of Economic Theory* 16 (1977):167-207.
- Wolfe, H.B. et al.** *Health Care Cost Containment: Challenge to Industry*. New York: Research Foundation of Financial Executives Institute, 1980.
- Wolfson, A.D. and Tuohy, C.J.** *Opting Out of Medicare: Private Medical Markets in Ontario*. Ontario Economic Council Research Study No. 19. Toronto, Canada: University of Toronto Press, 1980.
- *Wolinsky, F.D.** "The Performance of Health Maintenance Organizations: An Analytic Review." *Milbank Memorial Fund Quarterly/Health and Society* 58 (Fall 1980):537-587.
- *Woodward, A.** "The U.S. Health Insurance Industry: An Alternative View." *International Journal of Health Services* 8 (1978):491-507.
- *Woodward, R.S. and Warren-Boulton, F.** "Physician Productivity and Remuneration Method." In *Issues in Physician Reimbursement*, edited by N.T. Greenspan. Washington, D.C.: Department of Health and

Human Services, Health Care Financing Administration, 1981.

Worcester, D.A. and Nesse R. *Welfare Gains from Advertising*. Washington, D.C.: The American Enterprise Institute, 1978.

Worthington, W. and Silver, L.H. "Regulation of Quality of Care in Hospitals: The Need for Change." *Law and Contemporary Problems* 35 (Spring 1970):305-333.

Yett, D.E. "Comment on 'Competition Among Physicians'." In *Competition in the Health Care Sector: Past, Present, and Future*, edited by W. Greenberg. Washington, D.C.: Federal Trade Commission, 1978.

Zaid, M.N. "The Power and Functions of Boards of Directors: A Theoretical Synthesis." *American Journal of Sociology* 75 (July 1969):79-111.

Zaretsky, H.W. "Regulation Vs. Competition." *Hospital Forum* (November/December 1980):7-9.

Zeckhauser, R.J. "Medical Insurance: A Case Study of the Tradeoff Between Risk Spreading and Incentives." *Journal of Economic Theory* 2 (1970):10-26.

Zeckhauser, R.J. "Ethics, Patient Behavior and the Organization of Medical Care." Cambridge, Massachusetts: Kennedy School of Government, Harvard University, 1974.

***Zeckhauser, R.J. and Zook, C.L.** "Failures to Control Health Costs: Departures from First Principles."

In *The New Approach to the Economics of Health Care*, edited by M. Olson. Washington, D.C.: American Enterprise Institute, 1981.

***Zelten, R.A.** "Consequences of Increased Third-Party Payments for Health Care Services." *Annals of the American Academy of Political and Social Science* 433 (May 1979):25-40.

Zook, C.L. and Moore, F.D. "High-Cost Users of Medical Care." *New England Journal of Medicine* 302 (May 1, 1980):996-1002.

Zubkoff, M. *Health: A Victim or Cause of Inflation*. New York: Milbank Memorial Fund, Prodist, 1976.

Zubkoff, M. and Blumstein, J.F. "The Medical Marketplace: Health Policy Formulation in Consideration of Economic Structure." In *National Commission on the Cost of Medical Care, Vol. 2: Collected Papers*. Chicago, Illinois: American Medical Association, 1978.

Zubkoff, M. et al., eds. "Hospital Cost Containment: Selected Notes for Future Policy." New York: Milbank Memorial Fund, 1978.

Zweifel, P. "Supplier-Induced Demand in a Model of Physician Behavior." In *Health, Economics, and Health Economics*, edited by J. Vander Gaag and M. Perlman. Amsterdam: North-Holland Publishing Co., 1981.

Data sources for research on competition in the financing and delivery of health services

97

The process of identification, review, and synthesis of the literature on competition in the health care sector points out the importance of existing data sources as determinants of the direction of both past and future research. For this reason, an attempt has been made to list the major data sources that have been used to conduct research in this area, as well as other data sources which might be potentially useful to researchers and policymakers as research extends into new areas. Two points should be made with respect to the availability and potential uses of data:

1. Some data sources listed here are available only on a restricted basis (e.g. the American Medical Association Physician Masterfile). These sources are included here because they represent a potentially useful set of data for addressing many critical policy issues. It must be recognized, however, that few researchers will be able to obtain access to all data sources described.
2. While data are important, the uses made of the data are of critical importance. Good policy is based upon a foundation of well-designed and conducted research. The researcher is responsible for using the data available in ways that are appropriate and adequate to address the policy issues of importance. The data, while important, are only an input to the production of information for policy formulation.

Table 5 presents these data sources by summarizing the title, unit of analysis, method used to collect the data, selected sample sizes, and the variables available in the data set.

TABLE 5: SELECTED DATA SOURCES FOR STUDY OF COMPETITION AND HEALTH CARE ISSUES

Title	Source	Unit of Analysis	Method/Sample Size
American Medical Association Physician Masterfile*	Physicians	Data from a number of sources is compiled and updated weekly by a computerized system; the file includes information on every known physician and medical student in the U.S. and on U.S. MDs practicing abroad	Two types of variables are included: (1) historical data (e.g., training, licensure, certification, specialty choice); and (2) current professional activities (e.g., current practice location, specialty, types of practice).
AMA Periodic Survey of Physicians*	Physicians	Sample of MDs surveyed yearly since 1966; sample sizes have increased from 3544 in 1966 to 11,121 in 1975	Practice characteristics, patient profiles, hours and weeks worked, utilization, professional income, professional expenses, professional fees, ancillary personnel data.
AMA Survey of 1960 and 1965 Graduates of American Medical Schools*	Medical School Graduates	5004 graduates in 1960 were interviewed while information on 5303 graduates in 1965 was gathered; in addition, the 1965 study included data on graduates' spouses; both studies were conducted in 1972	Physician's residence prior to entering medical school, sociological factors which influenced physician location choice, MDs previous practice locations and related factors, relative input of spouse into location decision.
American Dental Association, Bureau of Economic Research and Statistics*	Dentists	Nationwide survey of dental practice every two or three years since 1950; the 1975 survey utilized a stratified systematic sampling procedure to produce 3401 usable returns	Wide range of information on practice characteristics including practice type, hours worked, patient visits, auxiliary personnel, expenses, income, patient background measures, and standard demographic profiles.
American Hospital Association Annual Survey of Hospital*	Hospital	Survey of all hospitals in the U.S. and associated areas accepted for registration; conducted annually since 1961	Admissions, assets, bassinets, beds, average daily census, expenses, revenue, occupancy, personnel, stay length, facilities.
AHA Hospital Service Charges*	Hospitals	Data for all hospitals from 1967 to present	Charges made to patients by service rendered.
AHA Sources of Funding for Hospital Construction*	Hospital Construction Projects	Information for 1973, 1974, 1975	Sources of funding for hospital construction costs and type of construction.
Center for Health Administration Studies, University of Chicago 1970 Survey of Health Services Utilization and Expenditures	Individuals	11,619 persons interviewed; inner-city poor, rural and aged over-sampled; also includes data on respondents from records of hospitals, physicians, and insurance companies	Health service utilization and expenditures, health status, demographic and socioeconomic characteristics.
Blue Cross Association Annual Reports on Enrollment, Utilization, and Benefits*	Blue Cross Plans	Annual data from census of plans in U.S.	Type of enrollments by coverage classification, number of members by benefit type, number of claims by benefit type and coverage classification.
Department of Health and Human Services National HMO Census Prepaid Plans	HMO Prepaid Plans	National inventory of all prepaid health plans; updated annually between 1976-1979	Type of practice, types of sponsor, hospital days/1000, enrollment, physician visits per member, length of time in operation.
DHHS Bureau of Health Professions, Area Resource File	U.S. Counties	Compilation of recorded data for census of U.S. counties, some variables since 1940, 1950; periodic updates and additions of new data	Physician density, hospital facilities, ECF information, inpatient expenditures, population statistics, infant mortality, socioeconomic and demographic profiles, environmental data, hospital utilization, health manpower training data.

TABLE 5: SELECTED DATA SOURCES FOR STUDY OF COMPETITION AND HEALTH CARE ISSUES (cont.)

Title	Source	Unit of Analysis	Method/Sample Size
Health Insurance Association of America Prevailing Health Care Charges System, Survey of Hospital Semi-Private Room Charges*	Blue Cross Plans	Data from providers; both group and individual plans participate; conducted semiannually	Number of charges received, mean charge, modal charge, and prevailing charge at various percentage levels for each surgical and dental procedure performed in the preceding twelve months, number and rate of semi-private hospital beds.
Mathematica Telephone Survey of Physician Capacity Utilization	Sample of MDs surveyed in 1973, 1974, and 1975	Physician location, specialty status, board certification, practice characteristics, hours worked, waiting time, fees for routine visit.	
National Center For Health Statistics National Ambulatory Medical Care Survey	Office visits by U.S. population to office-based physicians	Probability sample of office-based MDs in U.S.; updated annually since 1973	Statistical data on ambulatory medical care: practice characteristics, demographic background of patients, reasons for visit, diagnosis, treatment or services, and disposition.
NCHS National Nursing Home Survey	Nursing Homes	National sample survey; 1963, 1969, and annually since 1973	Financial data, number of beds, residents and services provided, certification, utilization, staffing patterns and profiles including training experience, salaries, duties performed, health status of residents, background characteristics, methods of payment.
NCHS Master Facility Inventory	Individual Inpatient Facilities	National inventory of all inpatient health facilities in U.S.; updated annually since 1962	Ownership, major type of service provided, number of beds, patient census, staffing patterns, financial information.
NCHSR National Medical Care Expenditure Study	Households	National probability sample of 10,000 households and additional 1500 households w/o health insurance interviewed between 1977-1978	Direct out-of-pocket medical care expenditures, insurance premiums, insurance payments, type of insurance, access and utilization, demographic and socioeconomic profiles.
NCHS Hospital Discharge Survey	Discharged Hospital Patients	Data from medical records of a sample of nonfederal hospitals; conducted annually since 1965	Demographic characteristics, diagnoses, surgical procedures, disposition, charges, stay length.

*Availability may be restricted.

Current NCHSR Publications

National Center for Health Services Research publications of interest to the health community are available on request to NCHSR, Publications and Information Branch, 3700 East-West Highway, Room 7-44, Hyattsville, MD 20782 (telephone: 301/436-8970). Mail requests will be facilitated by enclosure of a self-addressed, adhesive-backed mailing label. These publications also are available for sale through the National Technical Information Service (NTIS), Springfield, VA 22161 (telephone: 703/487-4650). PB and HRP numbers in parentheses are NTIS order numbers. Publications which are out of stock in NCHSR are indicated as available only from NTIS. Prices may be obtained from the NTIS order desk on request.

Research Digests

The *Research Digest Series* provides overviews of significant research supported by NCHSR. The series describes either ongoing or completed projects directed toward high priority health services problems. Issues are prepared by the principal investigators performing the research, in collaboration with NCHSR staff. Digests are intended for an interdisciplinary audience of health services planners, administrators, legislators, and others who make decisions on research applications.

- (HRA) 76-3144 Evaluation of a Medical Information System in a Community Hospital (PB 264 353, available NTIS only)
- (HRA) 76-3145 Computer-Stored Ambulatory Record (COSTAR) (PB 268 342)
- (HRA) 77-3160 Program Analysis of Physician Extender Algorithm Projects (PB 264 610, available NTIS only)
- (HRA) 77-3161 Changes in the Costs of Treatment of Selected Illnesses, 1951-1964-1971 (HRP 0014598, available NTIS only)
- (HRA) 77-3163 Impact of State Certificate-of-Need Laws on Health Care Costs and Utilization (PB 264 352, available NTIS only)
- (HRA) 77-3164 An Evaluation of Physician Assistants in Diagnostic Radiology (PB 266 507, available NTIS only)
- (HRA) 77-3166 Foreign Medical Graduates: A Comparative Study of State Licensure Policies (PB 265 233, available NTIS only)
- (HRA) 77-3171 Analysis of Physician Price and Output Decisions (PB 273 312)
- (HRA) 77-3173 Nurse Practitioner and Physician Assistant Training and Deployment (PB 271 000, available NTIS only)

- (HRA) 77-3177 Automation of the Problem-Oriented Medical Record (PB 266 881, available NTIS only)
- (PHS) 78-3190 Uncertainties of Federal Child Health Policies: Impact in Two States (PB 283 202)
- (PHS) 80-3229 Responses of Canadian Physicians to the Introduction of Universal Medical Care Insurance: The First Five Years in Quebec (PB 80-137 979)
- (PHS) 79-3231 Israel Study of Socialization for Medicine (PB 293 887)
- (PHS) 79-3235 AAMC Longitudinal Study of Medical School Graduates of 1960 (PB 294 689)
- (PHS) 79-3238 Some Effects of Quebec Health Insurance (PB 294 097)
- (PHS) 79-3261 Medical Education Financing: Issues and Options (PB 80-134 851)
- (PHS) 80-3285 A Social and Economic Analysis of Professional Regulation in Optometry (PB 81-130908)

Research Summaries

The *Research Summary Series* provides rapid access to significant results of NCHSR-supported research projects. The series presents executive summaries prepared by the investigators. Specific findings are highlighted in a more concise form than in the final report. The *Research Summary Series* is intended for health services administrators, planners, and other research users who require recent findings relevant to immediate programs in health services.

- (HRA) 77-3162 Recent Studies in Health Services Research, Vol. I (July 1974 through December 1976) (PB 266 460)
- (HRA) 77-3176 Quality of Medical Care Assessment Using Outcome Measures (PB 272 455)
- (HRA) 77-3183 Recent Studies in Health Services Research, Vol. II (CY 1976) (PB 279 198)
- (PHS) 78-3187 Criterion Measures of Nursing Care Quality (PB 287 449)
- (PHS) 77-3188 Demonstration and Evaluation of a Total Hospital Information System (PB 271 079)
- (PHS) 78-3192 Assessing the Quality of Long-Term Care (PB 293 473)
- (PHS) 78-3193 Optimal Electrocardiography (PB 281 558)
- (PHS) 80-3199 Comparisons of Prepaid Health Care Plans in a Competitive Market: The Seattle Prepaid Health Project (PB 81-130890)
- (PHS) 78-3201 A National Profile of Catastrophic Illness (PB 287 291)

- (PHS) 79-3223 Medical Direction in Skilled Nursing Facilities (PB 300 845)
- (PHS) 79-3230 Per-Case Reimbursement for Medical Care (PB 294 688)
- (PHS) 79-3236 Nurse Practitioners and Physician Assistants: A Research Agenda (PB 294 084)
- (PHS) 80-3244 Quality of Ambulatory Care
- (PHS) 79-3247 A Demonstration of PROMIS (PB 80-185697)
- (PHS) 79-3248 Effects of the 1974-75 Recession on Health Care for the Disadvantaged (PB 80-138 449)
- (PHS) 79-3250 Effects and Costs of Day Care and Home-maker Services for the Chronically Ill: A Randomized Experiment (PB 301 171)
- (PHS) 81-3260 The Rhode Island Catastrophic Health Insurance Program: The First Three Years (PB 82-184565)
- (PHS) 80-3265 How a Medical Information System Affects Hospital Costs: The El Camino Hospital Experience (PB 80-178551)
- (PHS) 80-3266 Developing a Quality Assurance Strategy for Primary Care (PB 80-162 878)
- (PHS) 81-3277 Comparison of Strategies for the Development of Process Measures in EMS (PB 81-195695)
- (PHS) 81-3283 Methods for Evaluating Costs of Automated Hospital Information Systems (PB 80-178593)
- (PHS) 81-3298 Regulating Hospital Capital Investment: The Experience in Massachusetts
- (PHS) 79-3237 A Cost-Effective Approach to Cervical Cancer Detection (PB 295 515)
- (PHS) 79-3245 Costs and Benefits of Electronic Fetal Monitoring: A Review of the Literature (PB 294 690)
- (PHS) 79-3251 Computer Applications in Health Care (PB 300 838)
- (PBS) 79-3258 Effects and Costs of Day Care and Home-maker Services for the Chronically Ill: A Randomized Experiment (PB 80-138 100)
- (PHS) 80-3263 Health Status, Medical Care Utilization, and Outcome: An Annotated Bibliography of Empirical Studies: Parts I-IV (PB 284 997, available NTIS only)
- (PHS) 81-3272 Estimated Economic Costs of Selected Medical Events Known or Suspected to be Related to Administration of Common Vaccines (PB 81-192171)
- (PHS) 80-3279 Health Care Surveys Using Diaries (PB 81-130593)
- (PHS) 81-3295 A Social and Economic Analysis of Professional Regulation in Optometry (PB-81 210759)
- (PHS) 81-3300 Hispanic Health Services Research — A Preliminary Bibliography (PB 81-224149)
- (PHS) 81-3303 Health Planning Review of Medical Information Systems (PB 81-223018)
- (PHS) 82-3310 Evaluation of Paramedic Services for Cardiac Arrest (PB 82-183674)

Research Reports

The *Research Report Series* provides significant research reports in their entirety upon the completion of the project. Research Reports are developed by the principal investigators who conducted the research, and are directed to selected users of health services research as part of a continuing NCHSR effort to expedite the dissemination of new knowledge resulting from its project support.

- (HRA) 77-3152 How Lawyers Handle Medical Malpractice Cases (HRP 0014313)
- (HRA) 77-3159 An Analysis of the Southern California Arbitration Project, January 1966 through June 1975 (HRP 0012466)
- (HRA) 77-3165 Statutory Provisions for Binding Arbitration of Medical Malpractice Cases (PB 264 409, available NTIS only)
- (HRA) 77-3184 1960 and 1970 Spanish Heritage Population of the Southwest by County (PB 280 656, available NTIS only)
- (HRA) 77-3189 Drug Coverage under National Health Insurance: The Policy Options (PB 272 074)
- (PHS) 78-3204 Experiments in Interviewing Techniques: Field Experiments in Health Reporting (PB 276 080, available NTIS only)
- (PHS) 79-3210 Telehealth Handbook: A Guide to Telecommunications Technology for Rural Health Care, (PB 292 557, available NTIS only)
- (PHS) 78-3211 Emergency Medical Technician Performance Evaluation (PB 285 961)
- (PHS) 79-3217-1 Evaluation of Child Abuse and Neglect Demonstration Projects, 1974-77, Vols. 1 and 2 (PB 278 438 and 278 439; vols. 1-12, PB 278 437, the set)
- (PHS) 78-3219 Needed Research in the Assessment and Monitoring of the Quality of Medical Care (PB 288 826)

Research Proceedings

The *Research Proceedings Series* extends the availability of new research announced at key conferences, symposia and seminars sponsored or supported by NCHSR. In addition to papers presented, publications in this series include discussions and responses whenever possible. The series is intended to help meet the information needs of health services providers and others who require direct access to concepts and ideas evolving from the exchange of research results.

- (HRA) 77-3154 Advances in Health Survey Research Methods (PB 262 230, available NTIS only)
- (HRA) 77-3181 NCHSR Research Conference Report on Consumer Self-Care in Health (PB 273 811)
- (HRA) 77-3186 International Conference on Drug and Pharmaceutical Services Reimbursement (PB 271 386)
- (PHS) 78-3195 Emergency Medical Services: Research Methodology (PB 279 096)
- (PHS) 78-3207 Health Survey Research Methods, Second Biennial Conference (PB 293 492)
- (PHS) 78-3208 Drug Coverage Under National Health Insurance (PB 293 468)
- (PHS) 79-3209 Health Services Research in Puerto Rico (PB 292 326)
- (PHS) 80-3215 Cost Accounting for Pharmaceutical Services (PB 80-157 936)
- (PHS) 79-3216 Medical Technology: The Culprit Behind Health Care Costs? (PB 299 408)
- (PHS) 79-3225-1 Emergency Medical Services Research Methodology: Workshop 1 (PB 294 048)
- (PHS) 79-3225-2 Emergency Medical Services Research Methodology: Workshop 2 (PB 80-142 292)
- (PHS) 78-3227 Effects of the Payment Mechanism on the Health Care Delivery System (PB 291 231)

- (PHS) 79-3228 A National Conference on Health Policy, Planning, and Financing the Future of Health Care for Blacks in America (PB 292 559)
- (PHS) 79-3233 Emergency Medical Services Systems as a Health Services Research Setting (PB 297 102)
- (PHS) 79-3254 Medical Technology (PB 80-149 511)
- (PHS) 79-3256 Sharing Health Care Costs (PB 80 162 795)
- (PHS) 79-3257 Health Facility Reuse, Retrofit, and Reconfiguration (PB 80-142 383)
- (PHS) 81-3268 Health Survey Research Methods, 1979 (PB 81-242984)
- (PHS) 80-3288 Hispanic Health Services Research

Research Management

The *Research Management Series* describes programmatic rather than technical aspects of the NCHSR research effort. Information is presented on the NCHSR goals, research objectives, and priorities; in addition, this series contains lists of grants and contracts, and administrative information on funding. Publications in this series are intended to bring basic information on NCHSR and its programs to research planners, administrators, and others who are involved with the allocation of research resources.

- (PHS) 79-3220 Emergency Medical Services Systems Research Projects, 1978 (PB 292 558)
- (PHS) 80-3271 Emergency Medical Services Systems Research Projects Abstracts, 1979
- (PHS) 81-3287 Computer Tapes Available from 20 Health Services Research Projects
- (PHS) 81-3304 Emergency Medical Services Research Project Abstracts, 1980 (PB 81-218026)
- (PHS) 81-3307 Summary of Grants and Contracts Active on September 30, 1978 (PB 81-207375)

NHCES

The *National Health Care Expenditures Study Series* presents information and analyses on critical national health policy issues. Basic data were obtained from the National Medical Care Expenditure Survey, a statistical picture of how health services are used and paid for. Data Previews give preliminary estimates of key measures. The NHCES Instruments and Procedures reports reproduce and discuss the questionnaires used in collecting data in the household portion of the National Medical Care Expenditure Survey (NMCES), and explain the sample design and associated methods of variance estimation.

- (PHS) 80-3276 Data Preview 1: Who are the Uninsured?
- (PHS) 80-3275 Data Preview 2: Charges and Sources of Payment for Dental Visits with Separate Charges
- (PHS) 80-3278 Data Preview 3: Who Initiates Visits to Physicians' Offices?
- (PHS) 80-3290 Data Preview 4: Health Insurance Coverage of Veterans
- (PHS) 80-3291 Data Preview 5: Charges and Sources of Payment for Visits to Physician Offices
- (PHS) 80-3296 Data Preview 6: Waiting Times in Different Medical Settings: Appointment and Office Waits
- (PHS) 81-3297 Data Preview 7: Employer and Employee Expenditures for Private Health Insurance
- (PHS) 82-3320 Data Preview 9: Prescribed Medicines: Use, Expenditures, and Sources of Payment
- (PHS) 81-3280 Instruments and Procedures 1: NMCES Household Interview Instruments

- (PHS) 81-3281 Instruments and Procedures 2: NMCES Estimation and Sampling Variances in the Household Survey

Policy Research

The Policy Research Series describes findings from the research program that have major significance for policy issues of the moment. These papers are prepared by members of the staff of NCHSR or by independent investigators. The series is intended specifically to inform those in the public and private sectors who must consider, design, and implement policies affecting the delivery of health services.

- (HRA) 77-3182 Controlling the Cost of Health Care (PB 266 885)

50272-101

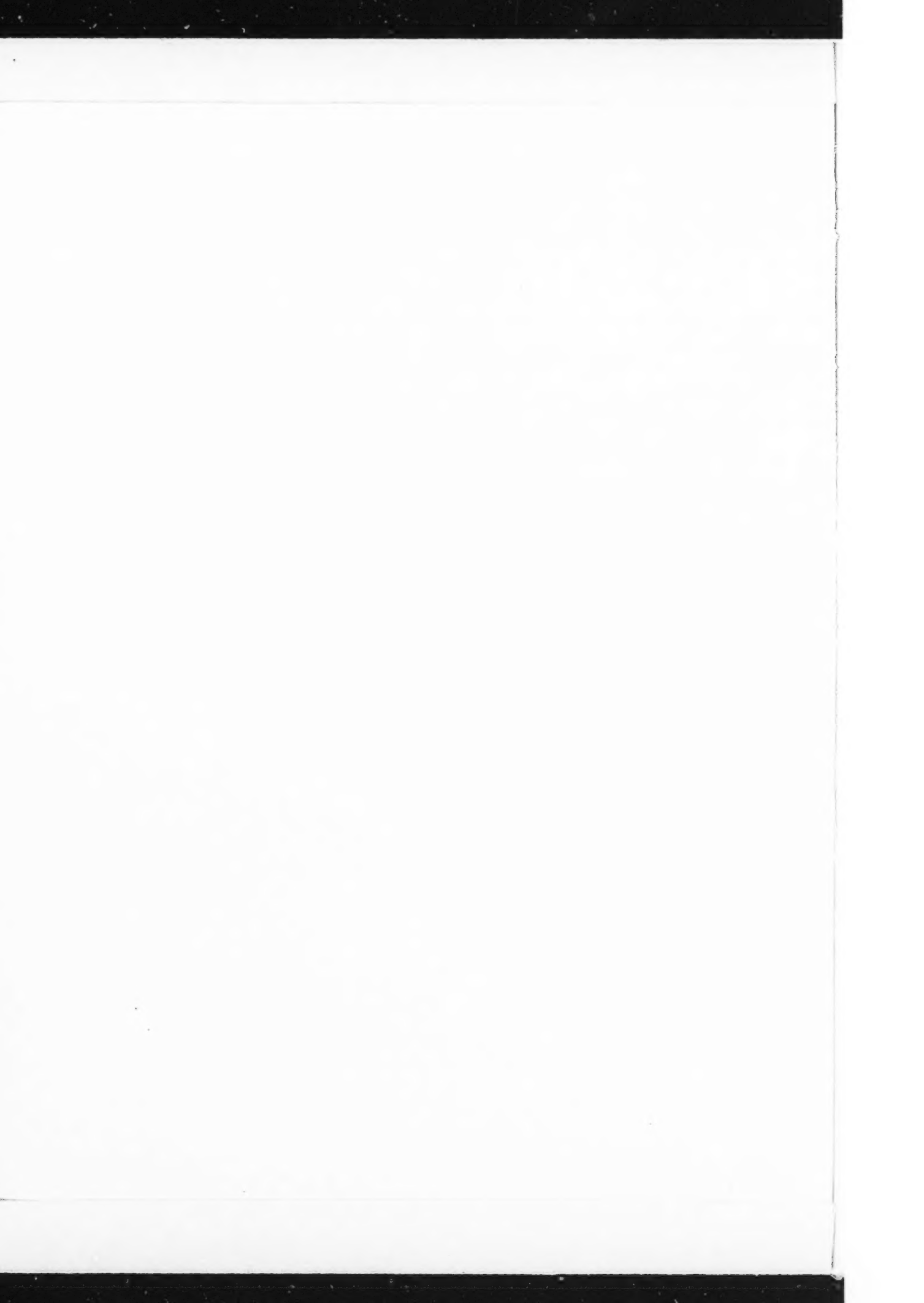
REPORT DOCUMENTATION PAGE		1. REPORT NO. NCHSR 82-74	2.	3. Recipient's Accession No.
4. Title and Subtitle An Annotated Bibliography of Research on Competition in the Financing and Delivery of Health Services - NCHSR Research Report Series			5. Report Date March 31, 1982	
7. Author(s) Kathryn M. Langwell, Joel D. Bobula, Sylvia F. Moore,			8. Performing Organization Rept. No.	
9. Performing Organization Name and Address Applied Management Sciences, Inc. 962 Wayne Avenue, Suite 701 Silver Spring, MD 20910			10. Project/Task/Work Unit No.	
12. Sponsoring Organization Name and Address DHHS, PHS, OHRST, National Center for Health Services Research Publications and Information Branch, Room 7-44 3700 East-West Highway Hyattsville, MD 20782 (Tel.: 301/436-8970)			11. Contract(C) or Grant(G) No. (C) 233-81-3031 (G)	
13. Type of Report & Period Covered Final Report 8/31/81 - 3/29/82			14.	
15. Supplementary Notes DHHS Publication No. (PHS) 83-3326. Library of Congress Card Catalog No. 82-600611.				
16. Abstract (Limit: 200 words) This annotated bibliography identifies and summarizes relevant research which provides insight into the issue of the nature and extent of competition and its effects in the market for health services. Literature containing discussions of proposed and/or implemented approaches to improving health services market performance is also included and summarized. A comprehensive bibliography of nearly 1,000 items is presented. Over 200 of the most relevant, useful, and important papers are annotated with the emphasis on describing the purpose, methods, and findings of each. These annotated items are also cross-classified by market area, emphasis, and policy issues addressed to assist researchers to identify significant research on selected topics of interest. Selected data sources that have been, or may be, used to conduct research on competition in the financing and delivery of health services are identified and described.				
17. Document Analysis a. Descriptors NCHSR publication of research findings does not necessarily represent approval or official endorsement by the National Center for Health Services Research or the U.S. Department of Health and Human Services. Louis F. Rossiter, Ph.D., 301/436-8966, NCHSR Project Officer. b. Identifiers/Open-Ended Terms Health services research Bibliography Competition Health services Synthesis c. COSATI Field/Group				
18. Availability Statement: Releasable to the public. Available from National Technical Information Service, Springfield, VA 22161 Tel.: 703/487-4650		19. Security Class (This Report) Unclassified		21. No. of Pages 100
		20. Security Class (This Page) Unclassified		22. Price

(See ANSI-Z39.18)

See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

U.S. GOVERNMENT PRINTING OFFICE: 1982-361-787:212



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Services Research
3700 East-West Highway
Hyattsville, Maryland 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF HHS
HHS 396



SPECIAL FOURTH-CLASS

NCHSR

DHHS Publication No. (PHS) 83-3326